European Monitoring Centre
for Drugs and Drug Addiction

DBDD
Deutsche Beobachtungsstelle für Drogen und Drogensucht
DHS IFT BZgA

Drugs

GERMANY

2019 Report of the national

REITOX Focal Point to the EMCDDA

(Data year 2018 / 2019)

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CONTENTS

0   Summary (T0)

0.1   Summary of the Drugs workbook (T0.1)

0.1.1 Drug use in the general population (T0.1.1)

In Germany, epidemiological data on drug use and drug users is available mainly on the basis of repeated national, representative surveys. Several studies are well-established, which make data available at regular intervals (currently, for example, every three to four years) on the use of various illicit drugs in the general population. The Drug Affinity Study (Drogenaffinitätsstudie, DAS) (DAS; Orth, 2016) is an analysis of substance use among adolescents and young adults (age group 12-25 years) on a long-term basis. In addition, the alcohol survey (Orth und Merkel, 2019)] also regularly asks questions regarding the cannabis use of adolescents and young adults. The Epidemiological Survey of Substance Abuse (Epidemiologische Suchtsurvey, ESA) examines the adult residential population in the age group 18-64 years (most recently Seitz et al., 2019b).

Based on the population survey, in Germany in 2018 approx. 15.2 million adults between 18-64 (Seitz et al., 2019b) and, in 2015, around 479,000 12 to 17-year-old adolescents (Orth, 2016) have used an illicit drug at least once in their life (Table 1). This corresponds to a lifetime prevalence of 29.5% and 10.2% respectively. The indicator of lifetime prevalence, however, also includes adult drug use from a long time ago. Based on the last 12 months, a prevalence of 8.2% and 7.5% of 4.2 million and 352,000 adolescent users respectively can be assumed. In the previous 30 days, 3.3% and 2.5% or around 1.7 million adults and 117,000 adolescents respectively had taken illicit drugs. Cannabis plays the most prominent role of all illicit drugs among both adolescents and adults. In comparison to other drugs, the substance clearly predominates, with a 12-month prevalence of 7.3% among 12 to 17-year-olds and 7.1% among 18 to 64-year-olds (Table 2). The proportion of adolescents and adults who have consumed any other drug in the same time period is 1.2% and 2.3% respectively.

In contrast to cannabis, the 12-month prevalence rates of all other individual substances is under 1% both for adolescents and adults. Among 12 to 17-year-olds, ecstasy (0.5%) as well as amphetamine and cocaine/crack (0.3% each) are the most frequently consumed drugs after cannabis. The use of heroin/other opiates, inhalants, new psychoactive substances and methamphetamine[1] occurs only rarely in this age group. Among adults aged 18-64, amphetamine (1.2%), new psychoactive substances (0.9%) as well as ecstasy and cocaine/crack (1.1% each) are the drugs, in addition to cannabis, which have notable prevalence rates.

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[1]   The ESA 2015 collected epidemiological data on methamphetamine use in Germany for the first time (Gomes de Matos et al., 2016a).

Table 1   Prevalence of the use of any illicit drug in Germany

	Source[1]	Age	Prevalence	Extrapolation[2]
Lifetime	ESA 2018	18-64	29.5%	15,206,000
	DAS 2015	12-17	10.2%	479,000
12-month	ESA 2018	18-64	8.2%	4,227,000
	DAS 2015	12-17	7.5%	352,000
30-day	ESA 2018	18-64	3.3%	1,701,000
	DAS 2015	12-17	2.5%	117,000

1) ESA Epidemiological Survey of Substance Abuse: The values include the substances cannabis, amphetamine/methamphetamine, ecstasy, LSD, heroin/other opiates, cocaine/crack, mushrooms, NPS.

DAS Drug Affinity Study: The values include the substances cannabis, ecstasy, LSD, amphetamine, methamphetamine (crystal meth), cocaine, crack, heroin, NPS, inhalants and psychoactive plants.

2) Figures are rounded. Extrapolations are based on population numbers of 51,544,494 people aged 18-64 years old (as of 31 December 2017; Statistisches Bundesamt) and 4,693,587 people aged 12-17 (as of 31 December 2014; Statistisches Bundesamt).

Table 2   12-month prevalence of illicit drug use in the general population

Source[1]	Age	Any illicit drug	Cannabis	Drug other than cannabis[2]
Total				
ESA 2018	18-64	8.3%	7.1%	2.4%
DAS 2015	12-17	7.5%	7.3%	1.3%
Male				
ESA 2018	18-64	10.2%	8.9%	2.9%
DAS 2015	12-17	8.4%	8.1%	1.3%
Female				
ESA 2018	18-64	6.4%	5.3%	1.8%
DAS 2015	12-17	6.5%	6.3%	1.1%

1) ESA Epidemiological Survey of Substance Abuse. DAS Drug Affinity Study.

2) Other drugs include the substances amphetamine/methamphetamine, ecstasy, LSD, heroin/other opiates, cocaine/crack, inhalants (only DAS), mushrooms, NPS.

0.1.2 Clinically relevant and problem drug use (T0.1.2)

In the ESA 2018, substance-related disorders for cannabis were recorded with the help of the written version of the Munich Composite International Diagnostic Interview (M-CIDI) (Wittchen et al., 1995). Criteria for the diagnoses of abuse and dependence were recorded according to the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV) using the time period of the previous 12 months. Abuse according to DSM-IV was present in 0.7% of men and 0.4%

of women. For the whole population the figure was 0.6%. In contrast, dependence according to DSM-IV was present among 1.0% of men and 0.3% of women. For the whole population the figure was 0.6%. In both cases, abuse and dependence is estimated to be around 309,000 people (Atzendorf et al., 2019). Looking at the survey years between 1997 and 2018, cannabis abuse and dependence according to DSM-IV has remained broadly constant for both genders (Seitz et al., 2019c). There was evidence of amphetamine/methamphetamine abuse according to DSM-IV for 0.1% of 18 to 64-year-old respondents. This corresponds to an estimated 57,000 people in Germany. In contrast, amphetamine/methamphetamine dependence according to DSM-IV was recorded among 0.2% of respondents (103,000 people) (Atzendorf et al., 2019). The estimated values for cocaine abuse and dependence according to DSM-IV, each with an estimated prevalence of 0.1%, are an estimated 41,000 to 57,000 affected people.

0.1.3 Drug use among school pupils, students attending vocational schools and students (T0.1.3)

In Germany a number of pupil surveys are conducted which make information on substance use available. Of note is that those studies are all regionally limited, i.e. only conducted in individual cities or in one or just a few *Laender*. Nationally comparable data on substance use among pupils is for this reason not available. Data is currently available from four studies. A repeating pupil survey in Frankfurt am Main was carried out in 2018/19, in the scope of the Monitoring System on Drug Trends (Monitoring System Drogentrends, MoSyD) (Werse et al., 2019b). In Bavaria, the German data collection for the European School Survey Project on Alcohol and Other Drugs (ESPAD) was performed in 2019, the results of which will be available in 2020; in the current report the 2015 data will be presented (ESPAD; Kraus et al., 2016). In Lower Saxony, a regular pupil survey - the Lower Saxony Survey - was continued in 2017 (Bergmann et al., 2019). In 2018, the SCHULBUS survey was carried out in Hamburg (Baumgärtner und Hiller, 2019) and Bavaria[2], in 2016/17 in the city state of Bremen (Baumgärtner und Hiller, 2017) and in 2015 in Hamburg, Bavaria, Saxony and North Rhine-Westphalia (Baumgärtner und Hiller, 2016). In the study Young Adults: Survey on Contact with Addictive Substances (JEBUS; Baumgärtner und Hiller, 2018), data was collected for the first time in 2016/17 on the substance use of 18 to 25-year-olds in vocational and higher education in Hamburg and major cities in Bavaria and Saxony.[3]

Cannabis clearly dominates over other illicit drugs among pupils as well (Table 3). The lifetime prevalence of cannabis use in the Bavarian ESPAD study is, at 25.2%, only just below the total prevalence of the use of any illicit drug (27.1%). Other illicit drugs were used by 11.1% of the surveyed pupils. Comparable proportions are found in the other studies. In all pupil studies, males report a more frequent use of illicit drugs than females. Cannabis was also more frequently consumed than other illicit drugs among young adults in higher education and

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[2]   There is currently no data available on Bavaria.

[3]   Detailed results from the JEBUS study were reported in the 2018 report.

vocational education. The lifetime prevalence in this group is, however, roughly twice as high as that among school pupils. While there are hardly any differences between the types of educational institution, the use of other illicit drugs is more common among vocational students.

In the comparison of results from different pupil surveys in particular, it must be taken into account that the underlying studies have considerable methodological differences. For example, the age groups and the year groups surveyed are not uniform. Part of the differences in the prevalence estimates could also be attributable to the differing survey methods (written v. computer supported) as well as the different wording of the questions. Finally, there also exist some considerable regional differences in use behaviour and the characteristics of the markets (e.g. availability, price and/or purity for different substances).

Table 3   Prevalence of illicit drug use among school pupils, university students and vocational school students

Source[1]	Age	Time reference	Any illicit drug	Cannabis	Drug other than cannabis[2]
ESPAD 2015					
Bavaria	13-19	Lifetime	27.1%	25.2%	11.1%
SCHULBUS 2018					
Hamburg	14-17	Lifetime	n.r.	25.4%	7.8%
SCHULBUS 2016/17					
City state Bremen	14-17	Lifetime	n.r.	23.0%	5.4%
SCHULBUS 2015					
Bavaria	14-17	Lifetime	n.r.	15.8%	5.7%
Saxony	14-17	Lifetime	n.r.	20.2%	4.3%
North Rhine-Westphalia	14-17	Lifetime	n.r.	17.3%	4.5%
MoSyD 2018					
Frankfurt	15-18	Lifetime	n.r.	39%	9%
Frankfurt	15-18	12-month	n.r.	33%	5%
Lower Saxony Survey 2017					
Lower Saxony	M = 14.9	12-month	n.r.	12.9%	2.6%
JEBUS Higher education 2016/17					
Hamburg	18-25	Lifetime	n.r.	53.4%	15.4%
Bavaria	18-25	Lifetime	n.r.	48.1%	12.1%
Saxony	18-25	Lifetime	n.r.	52.3%	17.7%
JEBUS Vocational schools 2016/17					
Hamburg	18-25	Lifetime	n.r.	51.8%	23.9%
Bavaria	18-25	Lifetime	n.r.	51.1%	20.7%
Saxony	18-25	Lifetime	n.r.	51.1%	16.6%

1) ESPAD European School Survey Project on Alcohol and Other Drugs. MoSyD Monitoring System Drug Trends. JEBUS Young Adults: Survey on Contact with Addictive Substances.

2) "Other drugs" includes the following substances: ESPAD: amphetamine, methamphetamine, ecstasy, LSD, cocaine, crack, heroin, GHB, mushrooms, NPS.

   SCHULBUS: Ecstasy, mushrooms, LSD, amphetamine, methamphetamine, cocaine.

   Lower Saxony Survey: Ecstasy, speed, cocaine, LSD, angel's trumpet, magic mushrooms.

   MoSyD: summary of substances: psychoactive mushrooms, ecstasy, speed, cocaine, LSD, crack, heroin, crystal meth, GHB/GBL.

   JEBUS: Ecstasy, mushrooms, LSD, amphetamine, methamphetamine, cocaine

   n.r. not reported. M mean value

0.1.4 Trends in drug use in Germany (T0.1.4)

The trend in the use of any drug among both 12 to 17-year-olds and 18 to 64-year-olds has followed a similar pattern over the last 20 years (Orth, 2016, Seitz et al., 2019a). Following an increase in the prevalence rate from the early 1990s to 2003 and 2004, use then decreased again in the following years. Since 2011 and 2012, however, there has been a marked increase again. Among adults, the most marked changes are seen among 18 to 24-year-olds (see Figure 1). In the age-group above that, 25 to 29-year-olds, there is a similar trend, with the prevalence markedly lower than among young adults. Another much lower prevalence level with a flatter curve can be observed in the two oldest age groups. The pattern of the trend in drug use over time is mainly influenced by the prevalence of cannabis, which follows a similar course. As shown in Figure 2, the developments over time are similar for male and female adolescents.
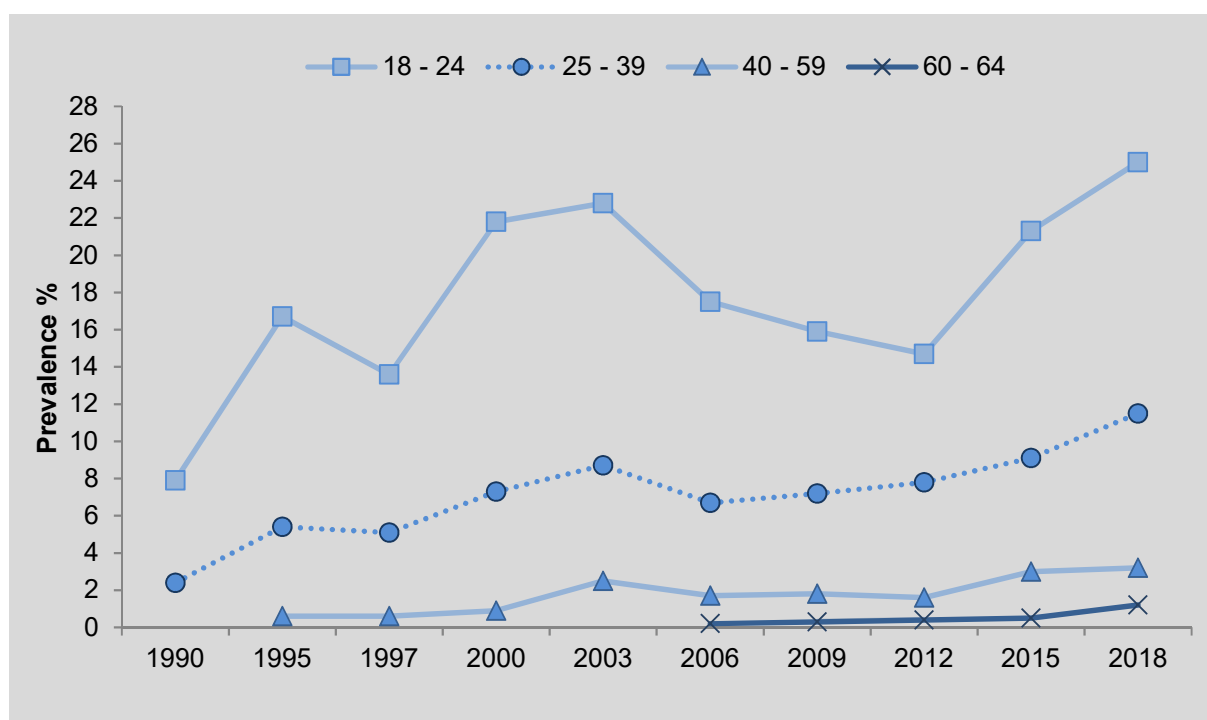
Figure 1   Trends in 12-month prevalence of use of any illicit drug among 18 to 64-year-olds in Germany, 1990-2015 (ESA) by age group
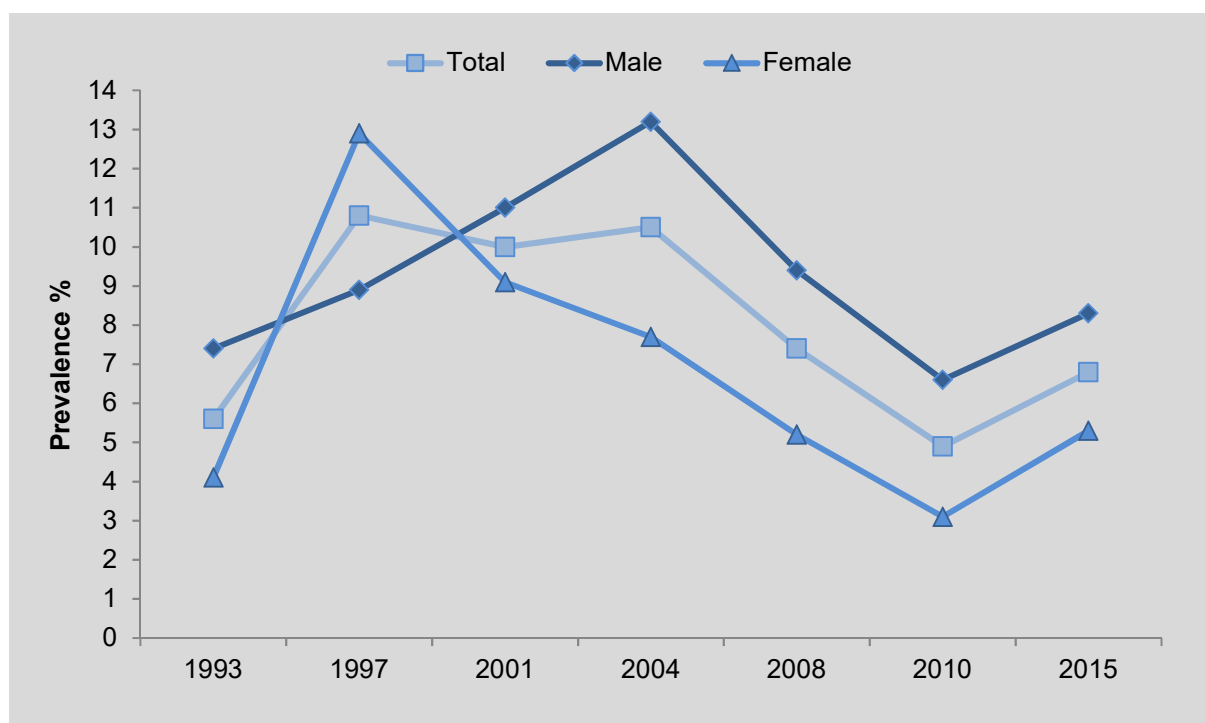
Figure 2   Trends in 12-month prevalence of use of any illicit drug among 12 to 17-year-olds in Germany, 1993-2015 (DAS) by gender

0.2   The use of illicit drugs with alcohol, tobacco and prescription drugs (T0.2)

There is no current information on the combination of illicit drugs with legal substances and prescription drugs. The data from the representative studies in the general population, in schools and in special sub-population groups allows evaluations to be made on the combined use of various substances within a defined timeframe (for example whether both alcohol and illicit drugs have been consumed within the last 12 months), whereas data on parallel, i.e. simultaneous, use, which could provide information about patterns of use, is not collected separately.

SECTION A: CANNABIS

1   National profile

1.1   Prevalence and Trends in NPS use (T1.1)

1.1.1 The relative importance of different types of cannabis (T1.1.1)

A distinction in the prevalence of different types of cannabis is not possible from the data currently available in Germany in the general population and in schools, since this information is not collected. This information is only collected in the MoSyD pupil survey in Frankfurt for the 30-day prevalence of cannabis products. A quarter of users (25%) reported only having smoked marijuana or "grass", a further 49% had consumed marijuana and hashish and 20% only hashish ("don't know": 6%). It is striking that marijuana is no longer the dominant cannabis product among Frankfurt pupils, but that it has been replaced by the mixed category (marijuana and hashish). In addition, consumption of hashish alone has significantly increased over the overall course of the study (see Figure 3) (Werse et al., 2019b).
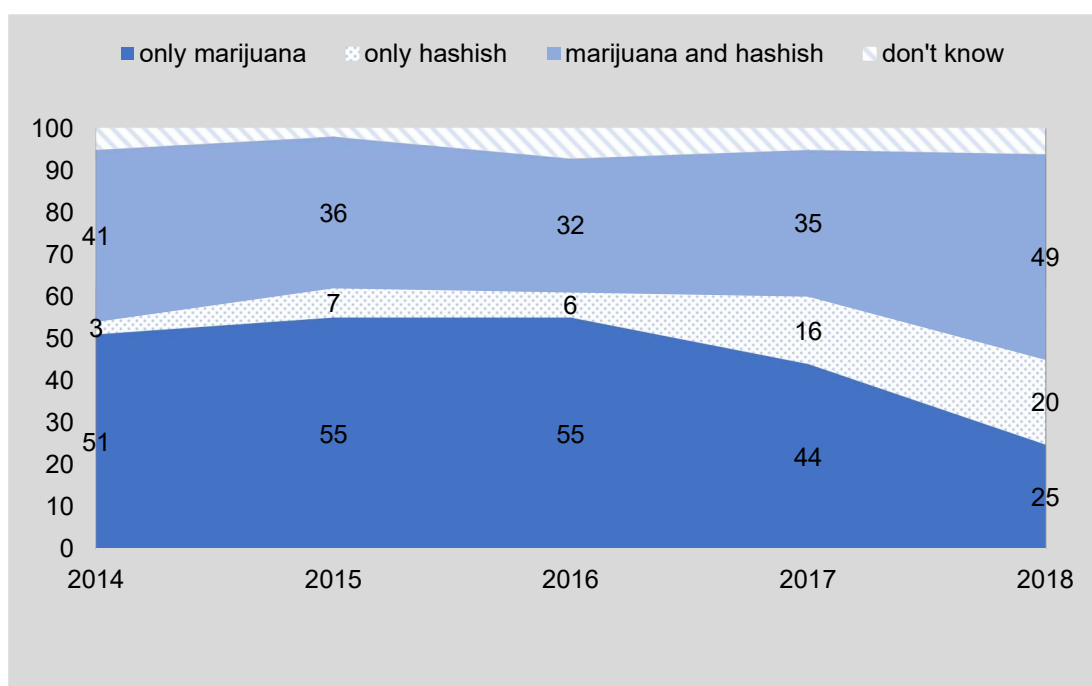
Figure 3   Cannabis products in the 15 to 18 age group (MoSyD)

1.1.2 Cannabis use in the general population (T1.1.2)

Cannabis is by some margin the most commonly used illicit drug in Germany. The proportion of people who have consumed cannabis at least once before in their lives is 28.3% for adults aged between 18 and 64 years old and is illustrated in Table 4 (Seitz et al., 2019b) and 10.0% for adolescents aged between 12 and 17 (Orth und Merkel, 2019). In relation to the last 12

months, 7.1% of adults and 6.9% of adolescents have consumed cannabis, with the 30-day prevalence rates at 3.0% and 3.4% respectively. In all age groups, the substance was consumed by a significantly higher proportion of men and boys than of women and girls.

Table 4   Prevalence of cannabis use in Germany

	Source[1]	Age	Total Prevalence	Male Prevalence	Female Prevalence
Lifetime	ESA 2018	18-64	28.3%	32.9%	23.4%
	AS 2018	12-17	10.0%	12.3%	7.6%
12-month	ESA 2018	18-64	7.1%	8.9%	5.3%
	AS 2018	12-17	8.0%	10.0%	5.8%
30-day	ESA 2018	18-64	3.0%	3.8%	2.1%
	AS 2018	12-17	2.9%	3.9%	1.9%

1) ESA: Epidemiological Survey of Substance Abuse. AS: Alcoholsurvey.

Over the time period of the last 28 years, the 12-month prevalence of cannabis use among 18 to 64-year-old adults has exhibited, with a wavelike pattern, an overall upward trend (Seitz et al., 2019d). The trend for each age group is shown in Figure 4: The prevalence increased significantly in particular in the youngest age group, 18 to 24-year-olds, from 7.7% in 1990 to 24.3% in 2018 (Seitz et al., 2019a). This is the highest proportion of cannabis users in this age group to date.
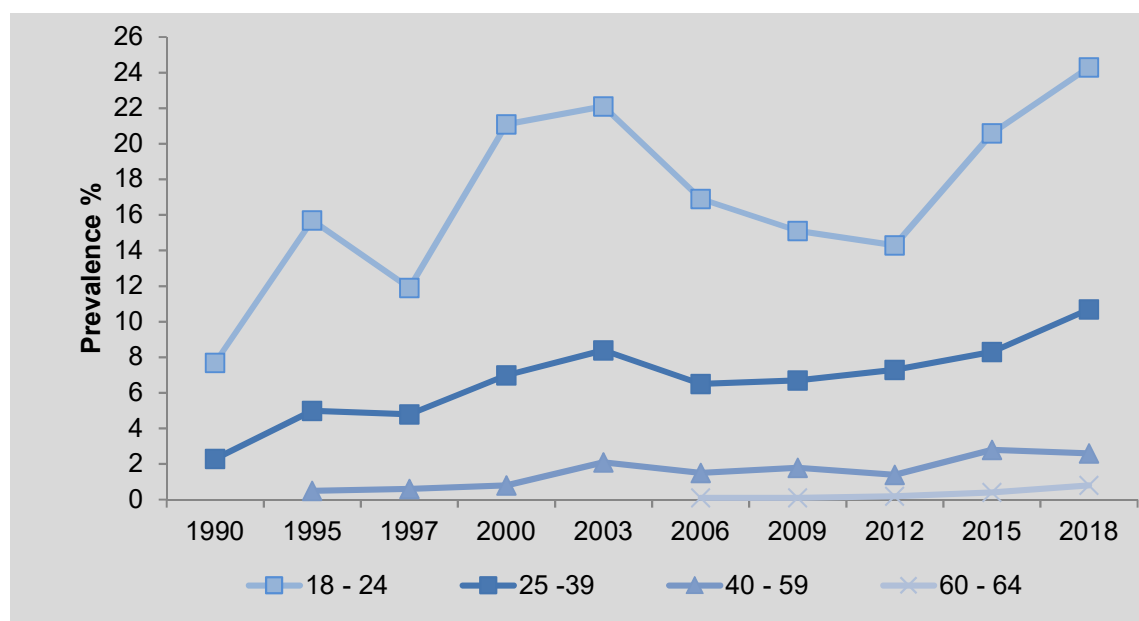
Figure 4   Trends in 12-month prevalence of cannabis use among 18 to 64-year-olds in Germany, 1990-2018 (ESA) by age group

An evaluation of the alcohol surveys shows that in the 12 to 17-year old male adolescent age group, the lifetime, 12-month and 30-day prevalence rates for cannabis use has increased since 2011. In the 12 to 17-year-old male adolescent group, the 12-month prevalence has significantly increased since 2011 (Figure 5). Among female adolescents, the 12-month prevalence is once again approaching its 2014 peak. With regards to type of school, no statistically significant differences in consumption have been observed. With regards to the connection between migration background and cannabis use, regular cannabis use is statistically significantly lower among adolescents with a Western European migration background compared to adolescents without a migration background (0.2% to 1.5%). Among 18 to 25-year-old young men and women, the lifetime prevalence between 2016 and 2018 as well as the 12-month and 30-day prevalence rates, namely regular cannabis use, increased in the period 2008 to 2018. The 12-month prevalence rates among 18 to 25-year-old men and women are higher in 2018 than any other survey since 1993 (Orth und Merkel, 2019).
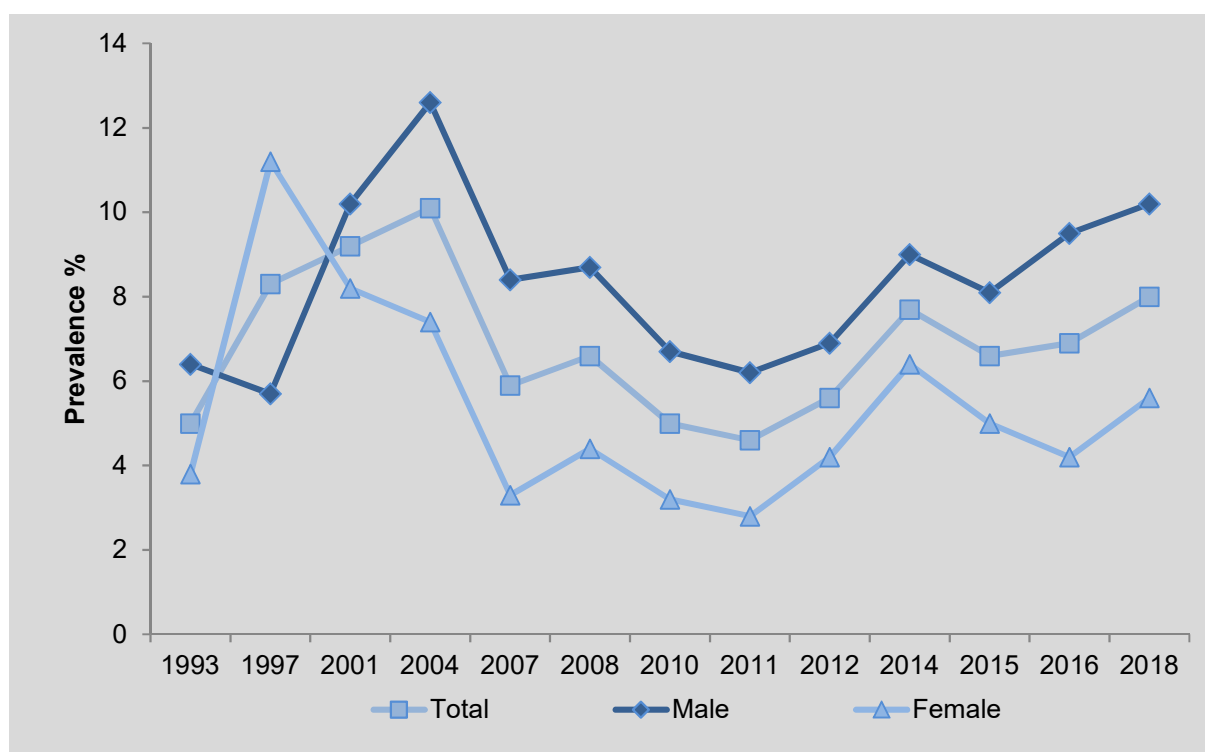
Figure 5   Trends in 12-month prevalence of cannabis use among 12 to 17-year-olds in Germany by gender, 1993-2018 (Drug Affinity Study and Alcohol Survey)

1.1.3 Cannabis use in school and other sub-populations (T1.1.3)

Cannabis use in schools

Detailed results on the most recent pupil surveys on substance use in Germany were presented in the 2017 report. Table 5 shows a summary of usage prevalence rates. New results are available for two of the repeating studies described.

In the most recent 2018 Frankfurt MoSyD survey, 39% of 15 to 18-year-olds reported having used cannabis at least once in their life (Werse et al., 2019b). In the last 12 months this figure was 33%. Among all prevalence rates, school boys still have a markedly higher rate than school girls. Following a continuous decrease in all prevalence rate values since 2015, for the first time a statistically significant increase has been seen in the current survey. The largest increase is in the 30-day prevalence, from 14% in 2017 to 22% in 2018. This value is therefore nearly as high as in 2015, when, at 23%, the highest value to date since 2002 was measured. The increase in all categories has simultaneously reduced the proportion of non-users.

In the SCHULBUS survey, the cannabis products hashish and marijuana represent the most widely consumed intoxicant among illicit drugs. Almost a quarter of young people in Bremen, Bremerhaven and Hamburg reported having used at least once before. In Hamburg, the lifetime prevalence of cannabis use increased slightly in 2018 compared to 2015 (Baumgärtner und Hiller, 2019). Worth mentioning is the fact that the attractiveness of cannabis has significantly declined since 2005 (Baumgärtner und Hiller, 2017).

Table 5   Prevalence of use of cannabis in 2015-18 among pupils

Source[1]	Age	Time reference	Total Prevalence	Male Prevalence	Female Prevalence
ESPAD 2015					
Bavaria	13-19	Lifetime	25.2%	31.8%	18.7%
		12-month	21.6%	27.9%	15.4%
SCHULBUS 2018					
Hamburg	14-17	Lifetime	25.4%	27.1%	23.4%
		30-day	13.7%	16.0%	10.9%
SCHULBUS 2016/17					
City state Bremen	14-17	Lifetime	23.0%	27.1%	18.6%
		30-day	11.4%	12.2%	10.2%
SCHULBUS 2015					
Bavaria	14-17	Lifetime	15.8%	21.1%	10.2%
		30-day	8.5%	11.1%	5.7%
Saxony	14-17	Lifetime	20.2%	22.6%	17.7%
		30-day	9.1%	10.9%	7.3%
North Rhine-Westphalia	14-17	Lifetime	17.3%	18.1%	16.5%
		30-day	7.8%	10.1%	5.3%
MoSyD 2018					
Frankfurt	15-18	Lifetime	39%	43%	35%
		12-month	33%	38%	28%
Lower Saxony Survey 2017					
Lower Saxony	M = 14.9	12-month	12.9%	n.r.	n.r.

1) ESPAD European School Survey Project on Alcohol and Other Drugs. MoSyD Monitoring System Drug Trends.

n.r. = not reported. M = mean value.

Cannabis use in vocational education and higher education

The JEBUS Study in 2016/2017 (Baumgärtner und Hiller, 2018) was the first time a survey in the context of (occupational) vocational training and higher education had been conducted. For that study, 18 to 25-year-old young adults were recruited in different German regions (Hamburg, Bavaria and Saxony). Across all regions surveyed, around one in two young adults reported having used cannabis at least once in their lives (48.1% to 53.4%). One in five respondents on average reported a corresponding use in the last 30 days (14.2% to 22.1%).

Consumption was more widespread among men than women. The experience of use of higher education and vocational students was largely similar. Regional differences were found, in that young adults in Hamburg tended to have higher prevalence rates than respondents in Bavaria and Saxony. Detailed results on the study were reported in the 2018 report.

Cannabis use in specific sub-populations

A large acceptance of cannabis can also be seen from a survey carried out, in the scope of the Phar-Mon NPS project, among visitors to electronic music events (Lochbühler und Hannemann, 2019). With a 12-month prevalence rate of 74.6%, cannabis is the most commonly used illicit substance by some margin.

In 2018, the scene study carried out in the scope of the MoSyD investigated substance use in the open drug scene in Frankfurt (Werse et al., 2019a). The lifetime prevalence of cannabis use has slightly increased since 2016, by 4 percentage points to 96%. The 12-month prevalence was 75%, stabilising again at the level of three quarters of respondents following a downward trend since 2014. The 30-day prevalence of cannabis has increased significantly again since its lowest levels to date in 2016, now lying, at 69%, at only just under the initial 1995 value. The cannabis 24-hour prevalence has even increased to a new high (35%).

1.2   Patterns, treatment and problem/high risk use (T1.2)

1.2.1 Patterns of cannabis use (T1.2.1)

For adolescents aged between 12 and 17 years old, several patterns of use can be seen in the most recent alcohol survey (Orth und Merkel, 2019). In particular, frequent use was examined, which was defined as "more than ten instances of use in the last twelve months". The proportion of adolescents affected overall was 1.6% (2016: 1.5%). The prevalence of regular cannabis use (male: 2.3%; female: 0.7%) is statistically significantly higher for male adolescents than female adolescents. Furthermore, regular cannabis use among boys has increased since 2010, whereas among girls it has fallen.

Among pupils in Frankfurt who have used cannabis in the last month, 19% have used intensively (daily use). This corresponds to 4% of all 15 to 18-year-old respondents in the 2018 survey. Thus, the proportion of users who consume intensively has increased significantly (2017: 10%, 2018: 19%). Frequent use (at least 10 times in the previous month) has also increased, from 2% in 2017 to 7% in 2018 (Werse et al., 2019b).

In the scope of the JEBUS Study (Baumgärtner und Hiller, 2018), problem use of cannabis was recorded by means of the Severity of Dependence Scale. Problem behaviour was assumed where an individual had a total score of 2 points or more. Across all three *Laender* examined, the 12-month prevalence of problem use was 7.0% in higher education and 8.5% in vocational education. in Bavaria and Saxony, fewer young adults were affected than in Hamburg.

1.2.2 Reducing the demand for cannabis (T1.2.2)

Specialist counselling and treatment of cannabis-related disorders in Germany is, for the most part, provided on an outpatient basis. Admittance and treatment on an inpatient basis is only provided for severe health disorders or in cases with a high risk of relapse (Hoch et al., 2015). In Germany, according to a study by the EMCDDA (European Monitoring Centre for Drugs and Drug Addiction), around 10% of cannabis users needing treatment (daily or almost daily use) receive it. In a comparison across all European countries, Germany is, together with Norway, amongst the countries with the highest percentage of people reached (Schettino et al., 2015).

Further information on the treatment of cannabis-related problems can be found in the Treatment workbook.

The data from the documentation system for addiction prevention, Dot.sys, shows that the proportion of specific services for reducing cannabis use has continued to grow (see Prevention workbook).

1.2.3 High risk cannabis use (T1.2.3)

In the ESA 2018, substance-related disorders for cannabis were recorded with the help of the written version of the Munich Composite International Diagnostic Interview (M-CIDI) (Wittchen et al., 1995). Criteria for the diagnoses of abuse and dependence were recorded according to the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV), using the time period of the previous 12 months. Abuse according to DSM-IV was present in 0.7% of men and 0.4% of women. For the whole population the figure was 0.6%. In contrast, dependence according to DSM-IV was present among 1.0% of men and 0.3% of women. For the whole population the figure was 0.6%. In both cases, abuse and dependence is estimated to be around 309,000 people (Atzendorf et al., 2019). Looking at the survey years between 1997 and 2018, cannabis abuse and dependence according to DSM-IV has remained broadly constant for both genders (Seitz et al., 2019d).

Results on problem cannabis consumption in 2015 from the 2015 ESPAD study in Bavaria were reported in the previous Drugs workbook.

In the SCHULBUS survey, cannabis dependence is defined as reaching a threshold of 2 points on the Severity of Dependence Scale (SDS) (Gossop et al., 1995) (Baumgärtner und Hiller, 2017, Baumgärtner und Hiller, 2019). In 2018, 5.3% of youths surveyed in Hamburg were thus classed as cannabis dependent. This affects male adolescents and older respondents above all. Problem use, however, generally exhibits a decreasing trend among male and female respondents as well as among younger respondents (14 to 15-year-olds) (Baumgärtner und Hiller, 2019). A similar picture can be seen in the city state of Bremen (2016/2017) (4.8% problematic use). If one instead considers the data separately, there are differences for Bremerhaven, where almost twice as many pupils are classed as cannabis dependent, at 7.9% (Bremen: 4%) (Baumgärtner und Hiller, 2017).

In the Frankfurt MoSyD survey, a subjective assessment of dependence was used based on the question of whether pupils are of the opinion that they are currently dependent on one or

more drugs. In 2017, a total of 2% described themselves as dependent on cannabis; the self-assessment in relation to cannabis dependence is low, as recorded between the years 2007 to 2009 and 2016. 4% are intensive users with daily consumption (2016: 1%) (Kamphausen et al., 2018).

In the Lower Saxony pupil survey, problem cannabis use is defined as use at least several times per month (Bergmann et al., 2019). The proportion of affected pupils in the current survey was 4.1%, thus remaining unchanged since 2013. Boys, pupils from lower types of school (secondary general or special schools) and migrants use cannabis more frequently in a problematic manner. Problem use has significantly increased among female pupils, even though male pupils continue to return significantly higher values. The value for pupils with a migration background has also significantly increased. It has significantly decreased at higher types of school (grammar school).

According to the 2017 Brandenburg pupil survey[4], 3.0% of female Brandenburg pupils and 5.6% of male pupils regularly consume cannabis (i.e. at least once a week). This represents an increase at a low level (2005: 1.8% and 4.9%; 2009: 1.6% and 3.3%; 2013: 2.0% and 4.4%). In absolute numbers, there are around 800 adolescents in the 10th grade, with clearly high-risk use (Land Brandenburg, 2017).

1.2.4 Synthetic cannabinoids (T1.2.4)

Specific information on the use of synthetic cannabinoids is available from the two pupil surveys, ESPAD Bavaria and the MoSyD pupil survey, and from one survey in the open drug scene. The prevalence of use of new psychoactive substances for individual groups was recorded. The results for the categories "herb mixtures" and "herbal smoke blends", which frequently include synthetic cannabinoids, are presented. These and further results for NPS in general can be found in section D.

2   Trends (T2)

Not applicable for this workbook.

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[4]   Brandenburg obtains information on substance use among adolescents from a pupil survey in the 10th grade, which has now been conducted four times, each four years apart. In the 2016/2017 school year, a total of 10,724 pupils from 17 administrative districts and administratively independent urban districts and thus 53% of all 10th grade pupils in Brandenburg took part in the current survey, "Brandenburg adolescents and substance use" (Brandenburger Jugendliche imd Substanzkonsum, BJS). The average age of respondents was 15.5 years old.

3 New developments (T3)

3.1 New developments in the use of cannabis (T3.1)

The current nationwide situation as well as current studies are reported above (see A1.1 and A1.2). No additional information is available on new developments in the use of cannabis.

4 Additional information (T4)

4.1 Additional sources of information (T4.1)

A special group of users and their behaviour was examined by Deimel et al. (2019). Within the scope of a quantitative online survey, data was collected from 782 football fans on their experience of violence, substance use, personality traits, aggressiveness, psychosocial stress and need for support. Cannabis consumption in the previous 30 days was significantly higher in this group, at 29.9%.

Further studies are presented in the 2018 Drugs workbook.

4.2 Further aspects of cannabis use (T4.2)

No information on further aspects of cannabis use is available.

SECTION B: STIMULANTS

1   National profile

1.1   Prevalence and trends (T1.1)

1.1.1 The relative importance of different stimulant drugs (T1.1.1)

Cocaine and amphetamines are the dominant substances among stimulants in Germany. Ecstasy is consumed less frequently overall. However, the importance of individual stimulants varies widely by region and scene as well as between age groups. The significance of amphetamine and methamphetamine appears to have increased in recent years. Growth rates, some of them considerable, have been observed for amphetamine, especially in the indicators from law enforcement authorities (users who come to the attention of law enforcement for the first time, relevant offences, seizures) (NB: crimes of low reportability - the more frequently the police perform checks, the higher the number of crimes become known or detected). In the area of counselling/treatment, for example, increased demand has been reported in recent years from outpatient counselling facilities and specialist walk-in clinics for support due to problems in connection with the use of amphetamine/methamphetamine. In national surveys on prevalence of use in the general public, these clear increases are not seen in the same way.

A general problem, in particular with data relating to health, is that the coding according to ICD-10 often does not allow any differentiation between amphetamine and methamphetamine. Whilst negative effects in connection with methamphetamine can be seen in some regions of Germany, similarly in the counselling/treatment realm and for law enforcement authorities, in other regions this substance has so far not played a role at all or only a minor role. Variables such as availability and regional preferences are also clearly important in relation to the use of stimulants.

1.1.2 Stimulant use in the general population (T1.1.2)

Table 6 offers an overview of the use of stimulants in the general population (adolescents and adults). Among 18 to 64-year-old adults in Germany, cocaine/crack is the stimulant with the highest lifetime prevalence (Seitz et al., 2019b). The lifetime prevalence for ecstasy use, at 3.9%, is slightly higher than the 3.8% rate for amphetamine. With a prevalence of 0.8%, methamphetamine plays a subordinate role. In relation to use in the last 12 months and last 30 days, amphetamine is more prevalent than other stimulants. In the case of cocaine, amphetamine and ecstasy, the lifetime prevalence rates differ very clearly from the 12-month prevalence rates, indicating mainly experimental use. For all substances, the prevalence values stated for men are much higher than those for women.

Table 6   Prevalence of use of stimulants in Germany

	Source[1]	Age	Total	Male	Female
Amphetamine					
Lifetime	ESA 2018	18-64	3.8%	4.6%	2.9%
	DAS 2015	12-17	0.3%	0.6%	0.1%
12-month	ESA 2018	18-64	1.2%	1.5%	0.9%
	DAS 2015	12-17	0.3%	0.5%	0.0%
Methamphetamine					
Lifetime	ESA 2018	18-64	0.8%	1.0%	0.6%
	DAS 2015	12-17	0.0%	0.0%	0.0%
12-month	ESA 2018	18-64	0.2%	0.3%	0.1%
	DAS 2015	12-17	0.0%	0.0%	0.0%
Ecstasy					
Lifetime	ESA 2018	18-64	3.9%	4.5%	3.2%
	DAS 2015	12-17	0.6%	0.7%	0.5%
12-month	ESA 2018	18-64	1.1%	1.2%	1.0%
	DAS 2015	12-17	0.5%	0.6%	0.5%
30-day	ESA 2018	18-64	0.3%	0.3%	0.3%
	DAS 2015	12-17	n.r.	n.r.	n.r.
Cocaine/crack					
Lifetime	ESA 2018	18-64	4.1%	5.0%	3.2%
	DAS 2015	12-17	0.5%	0.2%	0.8%
12-month	ESA 2018	18-64	1.1%	1.4%	0.8%
	DAS 2015	12-17	0.3%	0.1%	0.6%
30-day	ESA 2018	18-64	0.3%	0.4%	0.2%
	DAS 2015	12-17	n.r.	n.r.	n.r.

1) ESA Epidemiological Survey of Substance Abuse. DAS Drug Affinity Study.

   n.r. not reported.

Among 12 to 17-year-old adolescents, ecstasy is the most prevalent substance with a lifetime prevalence of 0.6% and a 12-month prevalence of 0.5% (Orth, 2016). The same proportion (0.3%) of adolescents reported having consumed amphetamine and cocaine/crack in the previous 12 months. The use of methamphetamine occurs very rarely in this group.

Over the period of the last 25 years, an overall increasing trend in amphetamine use can be seen among adults aged between 18 and 59 years old, from 0.4% in 1990 to 1.3% in 2018 (Seitz et al., 2019a). Cocaine/crack use also increased in the same period, from 0.3% to 1.2%. In relation to ecstasy, a decline from 0.8% to 0.4% was initially observed, between 1995 and 2012. By 2018, the prevalence had increased again to 1.2%. These represent the highest prevalence rates for all three substances since 1990 (see Figure 6).
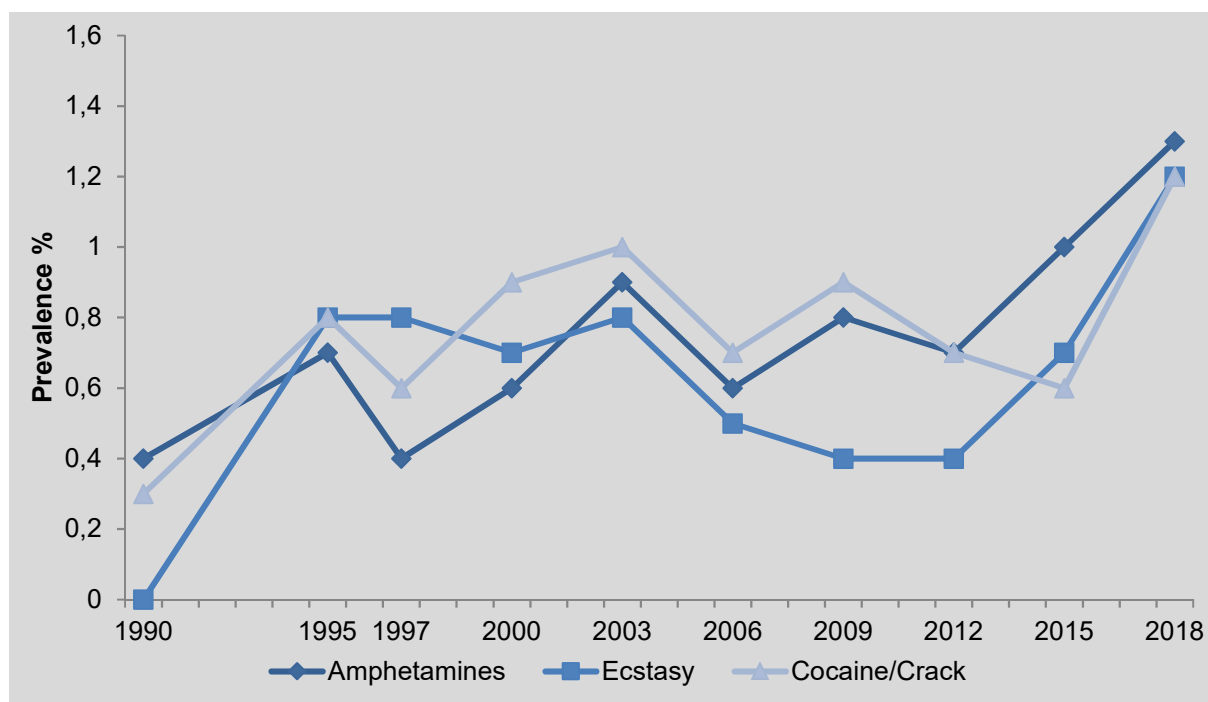
Figure 6   Trends in the 12-month prevalence of stimulant use among 18 to 59-year-olds in Germany, 1990-2015 (ESA)

The use of amphetamines, cocaine and ecstasy has decreased among 12 to 17-year-old adolescents (Figure 7). Whilst in 1997, 2.6% had used ecstasy in the previous 12 months, 1.3% had used amphetamines and 0.9% cocaine, in 2015 it was only 0.4%, 0.2% and 0.2% respectively.
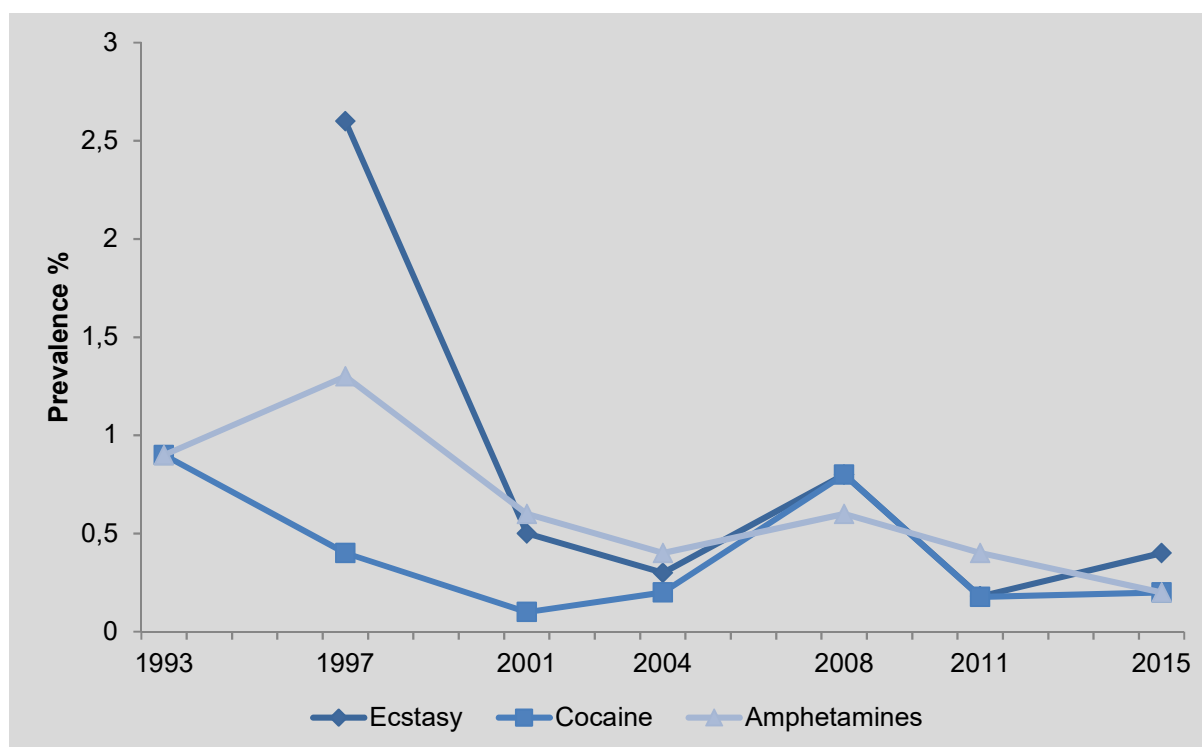
Figure 7   Trends in the 12-month prevalence of stimulant use among 12 to 17-year-olds in Germany, 1990-2015 (DAS)

1.1.3 Stimulant use in school and other sub-populations (T1.1.3)

Stimulant use in schools

An overview of stimulant use among school pupils can be found in Table 7. Almost 3% of Bavarian pupils have had experience with amphetamine (2.8%) and ecstasy (2.7%) (Kraus et al., 2016). Furthermore, cocaine has been consumed at least once by 2.1% of adolescents. The lowest prevalence rate was 0.5% for methamphetamine. All substances were used less often by girls than boys. The highest prevalence of use of stimulants is reported by secondary general school pupils. In comparison to 2011 in particular, the use of amphetamines has significantly decreased in Bavarian schools. There were no changes in respect of ecstasy and cocaine.

In the last SCHULBUS survey in Hamburg (2018), ecstasy had the highest prevalence rate at 3.4%, followed by cocaine (3.0%), amphetamine (2.1%) and methamphetamine (1.1%) (Baumgärtner und Hiller, 2019). The values have all risen slightly in comparison to 2015 levels (with the exception of amphetamine).

The JEBUS Study (Baumgärtner und Hiller, 2018) recorded the prevalence of methamphetamine among young adults (18 to 25-year-olds) in vocational schools and in higher education (the survey did not ask about other stimulants). At a rather low level overall, methamphetamine use among vocational students is significantly more prevalent than among higher education students of the same age. In Saxony, almost one in 20 students surveyed in vocational education had tried methamphetamine at least once in their life, while the

corresponding values for lifetime prevalence among trainees in Hamburg and Bavaria was significantly lower, at 1.8% and 2.6% respectively. There is not such a clear-cut regional context for the 30-day prevalence, however.

Speed, with a lifetime prevalence of 4%, is now the most prevalent stimulant in the Frankfurt MoSyD study in comparison to 2017 (3%). As far as ecstasy is concerned, the decline that had been observed since 2015 continued and it is now at the same level as cocaine (3%), the lifetime prevalence of which has also decreased. No change was seen in relation to methamphetamine (Werse et al., 2019b).

Table 7   Prevalence of stimulant use among pupils in 2016/2018

Source[1]	Age	Substance	Total	Male	Female
ESPAD 2015					
Bavaria	13-19	Amphetamine	2.8%	3.4%	2.3%
		Methamph.	0.5%	0.7%	0.3%
		Ecstasy	2.7%	3.5%	1.9%
		Cocaine	2.1%	2.5%	1.8%
SCHULBUS 2018					
Hamburg	14-17	Amphetamine	2.1%	n.r.	n.r.
		Methamph.	1.1%	n.r.	n.r.
		Ecstasy	3.4%	n.r.	n.r.
		Cocaine	3.0%	n.r.	n.r.
SCHULBUS 2015					
Bavaria	14-17	Amphetamine	2.0%	n.r.	n.r.
		Methamph.	1.4%	n.r.	n.r.
		Ecstasy	2.5%	n.r.	n.r.
		Cocaine	2.0%	n.r.	n.r.
Saxony	14-17	Amphetamine	0.6%	n.r.	n.r.
		Methamph.	0.6%	n.r.	n.r.
		Ecstasy	0.9%	n.r.	n.r.
		Cocaine	1.3%	n.r.	n.r.
North Rhine Westphalia	14-17	Amphetamine	2.6%	n.r.	n.r.
		Methamph.	0.6%	n.r.	n.r.
		Ecstasy	3.0%	n.r.	n.r.
		Cocaine	2.0%	n.r.	n.r.

JEBUS Vocational schools 2016/17					
Hamburg	18-25	Methamph.	1.8%	3.0%	0.7%
Bavaria	18-25	Methamph.	2.6%	3.4%	1.9%
Saxony	18-25	Methamph.	4.5%	6.1%	3.0%
All 3 *Laender*	18-25	Methamph.	2.7%	3.6%	1.7%
JEBUS Higher education 2016/17					
Hamburg	18-25	Methamph.	0.8%	0.8%	0.7%
Bavaria	18-25	Methamph.	0.8%	1.0%	0.3%
Saxony	18-25	Methamph.	1.5%	1.7%	1.3%
All 3 *Laender*	18-25	Methamph.	1.0%	1.2%	0.8%
MoSyD 2018					
Frankfurt	15-18	Speed	4%	5%	3%
		Methamph.	1%	1%	1%
		Ecstasy	3%	4%	3%
		Cocaine	3%	3%	3%

1) ESPAD European School Survey Project on Alcohol and Other Drugs. MoSyD Monitoring System Drug Trends.

n.r. not reported.

Stimulant use in specific sub-populations

Stimulants play a major role among visitors of electronic music events (Lochbühler und Hannemann, 2019). Behind cannabis, the second, third and fourth most frequently consumed substances, with 12-month prevalence rates of 54.7%, 43.8% and 30.6% respectively, are ecstasy (MDMA), amphetamine (speed) and cocaine.

1.2   Patterns, treatment and problem/high risk use (T1.2)

1.2.1 Patterns of stimulant use (T1.2.1)

The results of the ESA indicate that the overwhelming majority of persons who used stimulants in the last 12 months also used at least one other illicit drug in the same time period (Seitz et al., 2019b) 99.5% of the people who had used ecstasy in the previous 12 months had also consumed at least one other substance. This figure was 86.8% for cocaine/crack and 89.2% for amphetamine. Cannabis is the drug most frequently reported after stimulants (73.8% and 87.0%). However the other stimulants also play a large part. Experimental use (less than once per month) predominates among the majority of 12-month users. Occasional use (at least once per month) is the highest for methamphetamine (20.1%) and ecstasy (19.7%). 2.1% of ecstasy users, 4.0% of cocaine users, 19.7% of methamphetamine users and 17.5% of amphetamine users reported a frequent use of at least once per week (Seitz et al., 2019b).

The results of the 2015 ESPAD survey in Bavaria were reported in the 2018 Drugs workbook.

1.2.2 Treatment: stimulants (T1.2.2)

More information on the treatment of patients with methamphetamine-related disorders can be found in the 2019 Treatment workbook and the 2018 Drugs workbook.

1.2.3 High risk stimulant use (T1.2.3)

Calculations on the basis of a treatment multiplier for 2017 (for an outline of the estimation method see section E2) for the target group of clients with cocaine and stimulant problems (F14 and F15 codes according to ICD-10) produce an estimate of 84,000-99,000 (2016: 88,000-105,000). The estimates are at 1.5-1.8 (per 1,000 population) among 15 to 64-year-olds. This value has significantly increased almost continuously in the last ten years. It fell for the first time in 2017, although only slightly. It must also be taken into account in this regard that the DSHS Core Data Set (Kerndatensatz, KDS) was changed in 2017.

In the ESA 2018, substance-related disorders for cocaine and amphetamine/methamphetamine were recorded with the help of the written version of the Munich Composite International Diagnostic Interview (M-CIDI) (Wittchen et al., 1995). Criteria for the diagnoses of abuse and dependence were recorded according to the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV) using the time period of the previous 12 months. There were indications of amphetamine abuse according to DSM-IV for 0.1% of 18 to 64-year-old respondents. This corresponds to an estimated 57,000 people in Germany. In contrast, amphetamine dependence according to DSM-IV was recorded among 0.2% of respondents (103,000 people) (Atzendorf et al., 2019). The estimated values for cocaine abuse and dependence according to DSM-IV, each with an estimated prevalence of 0.1%, are an estimated 41,000 to 57,000 people affected.

1.2.4 Synthetic cathinones (T1.2.4)

Specific information on the use of synthetic cathinones is only available from the Frankfurt MoSyD scene study (Werse et al., 2019a). In that study, 8% of respondents from the open drug scene reported having already tried NPS stimulants at some point (cathinone, "bath salts" and others). Despite the slight increase in comparison to 2016, no significant change can be seen. The 12-month prevalence was 1%, the same as 2016.

1.2.5 Injecting and other routes of administration (T1.2.5)

In the scope of the 2018 MoSyD scene study in Frankfurt, users in the open drug scene were asked about the route of administration (Werse et al., 2019a). A significant change can be seen in the routes of administration of cocaine. The trend of recent years (significant decrease in injecting use and at the same time a notable increase in nasal use) has currently in part continued: exclusively injecting use reached a new low, while nasal use has also decreased at the same time, although, at more than a quarter, more respondents than ever are claiming

to administer cocaine both through injection and in other ways. That being said, the relatively low number of cases should be taken into account.

In relation to crack, 49% of respondents in 2018 reported exclusively smoking crack, 8% of users reported injecting only and 42% consumed the cocaine derivative both by injection and inhalation. Comparing time periods, it can be seen that exclusive smoking use, after a signification increase between 2012 and 2016, has now fallen by eight percentage points. In contrast, sole injecting use has fallen almost continuously since its peak in 2006 and has currently hit its lowest value to date. Correspondingly, the proportion of those who also smoke the cocaine derivative has significantly increased in this year's survey, compared to 2016, to 92%. The general injecting use of crack has risen again, however, although at 51% it is still at a relatively low level. Overall, the shift to increasing use by way of smoking has in part continued. While more respondents than ever before report smoking the drug, at the same time more users report injecting crack at least sometimes.

In the one-time study, carried out in 2017, on the characteristics of crack use in the Frankfurt street drug scene, the following picture emerged: crack is not only smoked by the respondents but also frequently injected. Patterns of use differ in part significantly: while some practice in the main so-called "binges", episodes of use lasting up to several days with subsequent pauses (of varying lengths), others consume comparably low amounts daily, sometimes only starting in the afternoon and have a regular sleep rhythm. Powder cocaine does have a better reputation among most respondents than crack and the effects are also described as more pleasant, nevertheless crack is preferred and not infrequently, even where powder cocaine is available, among other things because it is perceived as "more convenient". Other drugs, in particular with sedating effects, are frequently used for the purposes of mitigating undesired effects of crack; the drug is also directly combined with heroin, however. In addition, opioid substituting respondents refer to a desire for a "kick", which is achieved from crack (Werse et al., 2018).

Further information regarding routes of administration can be found in the Harms and Harm Reduction workbook.

1.2.6 Infectious diseases (T1.2.6)

Information regarding infectious diseases can be found in the Harms and Harm Reduction workbook.

2   Trends (T2)

Not applicable for this workbook.

3 New developments (T3)

3.1 New developments in the use of stimulants (T3.1)

Current data on the use of stimulants as well as the trend in recent years is explained in B1.1.1. Additional information on new developments is not available.

4 Additional information (T4)

4.1 Additional sources of information (T4.1)

Information on adjusting the treatment of methamphetamine-related problems can be found in the 2019 Treatment workbook and in the last Drugs workbook.

4.2 Further aspects of stimulant use (T4.2)

There is currently no further information available on stimulant use.

SECTION C: HEROIN AND OTHER OPIOIDS

1   National profile

1.1   Prevalence and trends (T1.1)

1.1.1 The relative importance of different opioid drugs (T1.1.1)

In Germany, the use of opioids is usually understood to mean the use of heroin or other substances that are used in substitution based treatment (polamidone, methadone, buprenorphine). Overall, there are indications that there is an aging population of opioid users. The estimated numbers of people who use opioids are relatively constant, depending on the indicator used.

1.1.2 Estimates of opioid use in the general population (T1.1.2)

In Germany there is no possibility for directly calculating the number of people using opioids. Therefore, this number is estimated with the help of various context indicators and different approaches. When interpreting the estimate, several limitations must be taken into account. On the basis of indicator-specific sources of errors which can exist from the point the data used is collected, and the different focus of the data collected and used for the estimate, in some cases widely differing estimates for the total number of opioid users in Germany can be produced. Calculations on the basis of a treatment muliplier for 2017 lead to an estimate of the number of high-risk users of heroin of between 128,000 and 152,000 people. This corresponds to a rate of 2.4 to 2.8 people per 1,000 population between the ages of 15 and 64 (see Table 8). Detailed remarks on the estimation method as based on the multiplier can be found in section E2, Methodology.

Table 8   Estimate of the prevalence of high risk opioid use from 2012 to 2017 (figures in 1000s, age group 15 to 64-year-olds)

Data Source	Reference Year						2018	Prevalence per 1,000
	2012	2013	2014	2015	2016	2017		
Treatment[1]	153-182	143-169	147-174	139-165	135-160	128-152	[2]	2.4-2.8
Police contacts	74-95	68-90	61-84	56-77	[3]	[3]	[3]	
Drug-related deaths	62-65	57-59	56-75	64-108	58-103	51-66	[4]	

1) Number of outpatient facilities according to the DSHS + estimate of 20% hidden participants.

2) Since the treatment facility data takes longer to be reported, that data is always one year behind the police data. See also section E2 Methodology, "EMCDDA estimation methods".

3) Extrapolations on the basis of the police contacts are no longer possible from 2015 onwards in the format used to date, due to a change in the BKA drugs data file (Falldatei Rauschgift, FDR).

3) Extrapolations on the basis of drug-related deaths are no longer possible for 2018 in the format used to date, due to a change in the DSHS KDS.

(DBDD 2019; special calculation)

The estimate based on the "treatment demand" multiplier, rose between 2007 and 2011, and since 2012 - apart from a slight increase from 2013 to 2014 - has been continuously declining. The increase in 2014 is due to the increase in clients with a primary opioid problem treated as inpatients in hospitals - without there being a systematic explanation of this increase. The values have slightly fluctuated in recent years without offering a different picture overall.

The number of heroin users coming to the attention of law enforcement for the first time decreased up to 2014. An increase was then observed once more in 2015 (2000: 7,914; 2014: 1,648; 2015: 1,888). The estimated values for the multiplier "police contacts", calculated from the last 8-10 years' data, fell overall.

The estimates of the multiplier "drug-related deaths" are based on the mortality rate amongst clients in outpatient treatment and on the number of drug-related deaths. The number of drug-related deaths increased from 2012 to 2016, before falling again in 2017. The estimated values for the multiplier "drug-related deaths" increased significantly for the first time in 2015 before falling somewhat since then.

A new estimate of the numbers of opioid addicts in Germany for 2016 is based on a) a full survey of opioid addicts, who in accordance with Sec. 5b BtMVV were registered on the BfArM substitution register, b) a count of the number of people registered in inpatient and outpatient addiction support not undergoing substitution therapy and an extrapolation to all facilities in Germany based on the DSHS, the Berlin addiction support statistics and the facility register of the German Monitoring Centre for Drugs and Drug Addiction and c) an estimate of the number of opioid addicts who have not yet accessed any addiction support services (Kraus et al., 2018, Kraus et al., 2019). For Germany this produces a total estimate of 166,294 people (lower and

upper limits: 164,794; 167,794) with an opioid dependency, of whom 123,988 are men (122,968; 125,007) and 42,307 are women (41,826, 42,787). With respect to the registered resident population in Germany in 2016 aged between 15 and 64, this produces a rate of 3.05 - 3.11 per 1,000 population. In comparison to earlier estimates, almost no changes can be seen in the last 20 years in respect of the number of people with an opioid dependency in Germany. Despite methodological limitations, a high validity of the estimate can be assumed. Almost all people with an opioid dependency are in contact with the addiction support system.

The lower and upper estimates of opioid addicts illustrated in Table 9 below for individual *Laender* are based on the numbers registered in the *Laender* for substitution therapy, the estimate of those not undergoing substitution and the estimate of the hidden extent. The estimates for the *Laender* fluctuate between 53,851 (53,366; 54,337) opioid dependent persons in North Rhine-Westphalia and 248 (245; 250) in Brandenburg. In the East German *Laender* (with the exception of Berlin) there are significantly fewer opioid dependent people than in western Germany. The highest rates of opioid dependency are estimated in the city states of Bremen, Hamburg and Berlin (Kraus et al., 2019).

Table 9   Estimate of the total number of people with opioid dependency, resident population in 2016 and rate of people with opioid dependency per 1,000 population, by *Land*

Land	Estimate	Population 2016 [1)]	Rate per 1,000
Baden-Württemberg	21,832	10,951,893	1.9
Bavaria	16,713	12,930,751	1.3
Berlin	10,943	3,574,830	3.1
Brandenburg	248	2,494,648	0.1
Bremen	3,745	678,753	5.5
Hamburg	8,847	1,810,438	4.9
Hesse	16,042	6,213,088	2.6
Mecklenburg-Western Pomerania	538	1,610,674	0.3
Lower Saxony	16,794	7,945,685	2.1
North Rhine-Westphalia	53,851	17,890,100	3.0
Rhineland-Palatinate	4,672	4,066,053	1.1
Saarland	1,480	996,651	1.5
Saxony	1,342	4,081,783	0.3
Saxony-Anhalt	1,467	2,236,252	0.7
Schleswig-Holstein	6,961	2,881,926	2.4
Thuringia	819	2,158,128	0.4

(Kraus et al., 2019)

Commentary on opioid use

Overall, the significance of the use of heroin and other opioids has, according to various data sources which provide information on drug use in Germany, decreased in recent years, presumably without the overall prevalence changing to a notable degree. In particular for younger persons, the use of opioids seems no longer to be attractive (in contrast, for example, to the use of stimulants) so that clients appearing at counselling and treatment facilities represent an aging cohort. This is also in line with indicators such as the fact that the average age of victims of drug-induced deaths has been rising for years (see, on this point, the Harms and Harm Reduction workbook). Furthermore, the data available from law enforcement statistics suggests a falling significance of the use of and dealing/trafficking in heroin. In contrast, there is evidence from care facilities, particularly in larger cities, which indicates an increasing challenge posed by refugee opioid users. The total number of affected persons does seem not to have changed dramatically in recent years as such persons can survive for longer than was previously possible due to the good care situation in terms of treatment options available to them. One cause for concern is the stagnating or falling number of doctors who offer outpatient substitution assisted treatment. In this respect, problems of care provision already exist in some rural regions of Germany. The stagnating and increasing numbers of drug-induced deaths must also be closely monitored. This can certainly be explained in part by the increasing age of the cohorts and their specific care needs, which possibly cannot be met everywhere - even if today a first pilot facility now exists in Unna for "old" heroin addicts.

1.1.3 Estimates of opioid use in sub-populations (T1.1.3)

There are currently no estimates of opioid use in sub-populations.

1.2 Patterns, treatment and problem/high risk use (T1.2)

1.2.1 Patterns of heroin/opioid use (T1.2.1)

In the current Frankfurt MoSyD scene study, it is evident that heroin (together with crack) remains by far the most commonly used drug in the street drug scene (Werse et al., 2019a, Werse et al., 2017). In the 24 hours before the survey, just under two thirds of respondents had used heroin (63%) and for crack it was 81%. Thus, both heroin and crack consumption have slightly fallen (in comparison to the previous year). As far as frequency of use is concerned, for heroin there were only minor changes to the previous year. On average, the respondents had taken 4.0 different drugs in the previous 30 days and 2.6 different drugs in the previous 24 hours (Werse et al., 2019a).

Information on comorbidities can be found in the last Drugs workbook.

1.2.2 Treatment: heroin and other opioids (T1.2.2)

Substitution based treatment is - after detoxification - the most commonly used form of intervention in the case of heroin/opioid dependence. In addition to that, there are, in particular

in an inpatient context, direct, abstinence based rehabilitation services. Information on the treatment of opioid users can be found in the Treatment workbook.

1.2.3 High risk opioid use (T1.2.3)

In the MoSyD scene study, just over two thirds (70%) of users reported intensive use of heroin, i.e. daily or nearly daily use, somewhat more than 2016 (67%) (Werse et al., 2019a). While this percentage has hardly changed since the previous survey, the proportion of respondents using only rarely increased slightly to 14%. Respondents who take three to eight consumption units daily now represent the largest group, whilst in 2016 this had been the group with up to three consumption units daily. In contrast, the number of people who do not consume heroin daily has remained constant. Just under one in ten users can be considered an excessive heroin user, with a level of use exceeding eight consumption units per day. The proportion of respondents who use heroin more than three times per day is 47% overall (2016: 43%). The changes in consumption intensity however are once more not statistically significant. This year, male respondents are more likely to have intensive heroin consumption patterns this year than female users in the scene.

1.2.4 Synthetic opioids (T1.2.4)

There is currently no specific information on the use of synthetic opioids.

1.2.5 Injecting and other routes of administration (T1.2.5)

Further information regarding routes of administration can be found in the Harms and Harm Reduction workbook.

For heroin, the MoSyD scene study reports a decreasing trend in intravenous use over the course of the survey in relation to the open drug scene in Frankfurt, however this is not confirmed in the current reporting year (Werse et al., 2019a). 59% prefer to inject heroin; this number had been falling since 2008, however in the current survey it has risen somewhat. Following a marked increase in 2016, nasal consumption has fallen to 17% again, while the proportion of those who consume heroin both via injection and other means has, following a significant fall in 2016, increased. 10% prefer to smoke heroin. Overall, the numbers of incidences of use of heroin - following a quite drastic change in 2016 - are currently almost identical to that of 2014. Nevertheless, this confirms the previously observed clear loss of importance in injecting use.

1.2.6 Infectious diseases (T1.2.6)

Information regarding infectious diseases among drug users can be found in the Harms and Harm Reduction workbook.

2 Trends (T2)

Not applicable for this workbook.

3   New developments (T3)

3.1   New developments in the use of heroin and other opioids (T3.1)

Aside from the situation described above, there are no known notable current developments.

4   Additional information (T4)

4.1   Additional sources of information (T4.1)

Important sources are described above. Further sources on topics such as injecting behaviour, infectious diseases and harm reduction amongst opioid users can be found in the Harms and Harm Reduction workbook.

4.2   Further aspects of heroin and opioid use (T4.2)

Data from the project "Guidance - addiction counselling for refugees" by the "emergency service for those at risk of addiction and addicts" (Notdienst für Suchtmittelgefährdete und - abhängige e.V., DND) is available for the group of substance-using people with a recent migration or refugee background. The service is primarily aimed at substance-using people with as yet insufficient language skills. In 2018, 518 substance-using people received counselling. 99.7% of them were male. Some women received counselling in a parallel project; in addition, substance use among women is especially stigmatised, meaning that this gender distribution cannot be concluded to be a general gender prevalence of addiction problems among refugees. As shown in Table 10, opioids represent the most frequent substance group by some margin, accounting for a good half of counselling needs. Cannabis is the focus of around one third of counselling provided. Alcohol was diagnosed as the main diagnosis fewer times in 2018 than 2017; the authors put this decline down to the fact that there was now another place for problem alcohol users to go and they were therefore somewhat more rarely counselled by Guidance. All other substances are significantly more rarely reported within counselling.

On the basis of the available figures, no general statements can be made for the refugees and recently migrated persons group.

Further information on the project can be found in the 2019 Harms and Harm Reduction workbook.

Table 10   Main diagnoses for individual counselling sessions in the "Guidance - addiction counselling for refugees" project

Main substance or diagnosis	2018 (%)	2017 (%)
Opioids	53.7	53.9
of which injecting use	4.4	5.5
Cannabis	32.5	27.2
Alcohol	6.3	10.7
Cocaine	2.2	1.2
Polydrug pattern of use	1.9	0
MDMA	0.9	0.8
Benzodiazepine	0.6	0
Crack	0.2	0.8

(Piest, 2019).

SECTION D: NEW PSYCHOACTIVE SUBSTANCES (NPS) AND OTHER DRUGS NOT COVERED ABOVE

1   National profile

1.1 New psychoactive substances (NPS), other new or novel drugs and less common drugs (T1.1)

1.1.1 NPS use: Prevalence and trends (T1.1.1)

Use of NPS in the general population

As shown in Table 11, in the adult general population in Germany, 2.6% of those aged between 18 and 64 have already had experience with NPS at least once in their lives (Seitz et al., 2019b). Based on the last 12 months, 0.9% have used such substances. For the time period of the previous 30 days, no corresponding use was reported. Among 12 to 17-year-old adolescents, the use of NPS is as good as non-existent (Orth, 2016). A mere 0.1% have already had experience with this substance group. Among adults, men use more frequently than women, whereas for adolescents there are no differences between the genders.

Table 11   Prevalence of NPS use in Germany

	Source[1]	Age	Total	Male	Female
Lifetime	ESA 2018	18-64	2.6%	3.1%	2.0%
	DAS 2015	12-17	0.1%	0.2%	0.0%
12-month	ESA 2018	18-64	0.9%	1.1%	0.8%
	DAS 2015	12-17	0.0%	0.0%	0.0%
30-day	ESA 2018	18-64	0.1%	0.1%	0.0%
	DAS 2015	12-17	n.r.	n.r.	n.r.

1) ESA Epidemiological Survey of Substance Abuse. DAS Drug Affinity Study.

n.r. not reported.

NPS use in schools

The Bavarian ESPAD survey showed that the overwhelming proportion (93.3%) had had no experience of NPS in the previous 12 months (Kraus et al., 2016). Nevertheless, this substance group had the highest prevalence rate in comparison to other illicit drugs aside from cannabis. At a level of 5.9%, the most prevalent form of NPS use among adolescents is herb mixtures. A use of NPS in powder or crystal form was reported by 0.9% of pupils. Other forms in which

NPS appear are used more than twice as often in secondary general schools (2.4%) than in grammar schools (0.7%) and intermediate secondary schools (0.9%).

In the Frankfurt MoSyD survey in 2018, a total of 4% of the 15 to 18-year-old respondents reported having consumed a herbal smoke blend at least once in their life (Werse et al., 2019b). For 1% this was also the case for the previous 30 days. 1% of adolescents also reported a use of more than five times in their lives. In comparison to the previous year, the lifetime prevalence of use of smoke blends has fallen to its lowest level since 2008. The figure for over five instances of use has also seen a fall, while the 30-day prevalence has had no change from the previous year. In response to the question about other legal high products ("bath salts", "fertiliser tablets" and similar products as well as "research chemicals" (RCs), namely pure active substances), 2% of respondents reported having tried a preparation of this nature on at least one occasion (2017: 3%). 0.5% (2017: 1%) of respondents also reported having taken other legal highs in the previous month. In comparison to the previous year, the prevalence for other legal highs has also seen a slight reduction at this relatively low level. At the same time, the authors of the study interpret these values as "maximum values", as it has been observed that a large proportion of the pupils who answer yes to these questions, name established illegal drugs and medication that can be abused in the open question and thus did not actually mean NPS as per the definition.

In Hamburg and Bremen, NPS use in schools is recorded in the SCHULBUS study. NPS lifetime prevalence was recorded at 4.4% - first place in the category of illicit drugs excluding cannabis. The value has increased from 2015 (2.7%) (Baumgärtner und Hiller, 2019). In Bremen and Bremerhaven, 2.3% of respondents had already tried these substances before and for 0.5% the last use was not more than 30 days previously (Baumgärtner und Hiller, 2017).

The JEBUS Study (Baumgärtner und Hiller, 2018) recorded the use of NPS in vocational and higher education among 18 to 25-year-olds in Hamburg, Saxony and Bavaria. This revealed a lifetime prevalence of 10.8% in vocational education (14.4% among men, 7.2% among women) and a significantly lower lifetime prevalence of 6.4% in higher education (8.3% among men, 4.5% among women). For the 12-month prevalence also, vocational students report significantly higher values, at 1% (1.5% of men, 0.6% of women), than students in higher education, at 0.3% (0.4% of men and 0.3% of women). Across the three *Laender*, Bavarian vocational schools returned a significantly higher lifetime prevalence, at 12.6%, than those in Saxony and Hamburg (4.2% and 8.5% respectively). No comparable effect is seen in the 12-month prevalence, however (Bavaria: 0.9%, Saxony: 0.6%, Hamburg: 1.4%). In higher education, there are no significant differences in the prevalence rates between the Länder.

NPS use in specific sub-populations

In the scope of the Phar-Mon NPS project, the use of NPS in different at-risk populations was recorded. In addition to visitors of electronic music events, clients of outpatient addiction support facilities and inmates in correctional institutions were surveyed on their use (Lochbühler und Hannemann, 2019). Out of a total of 810 partygoers who completed a survey,

n=134 people named at least one NPS that they had consumed at some point. Looking at the prevalence rates, NPS takes a subordinate role in the sample in comparison to conventional substances. In the 12 months before the survey, 8.6% of partygoers had consumed NPS. The 30-day prevalence was 3.8%. In response to the question as to which new psychoactive substances were consumed in the most recent instance of use, various different substances were named, among them generic designations (e.g. spice, "bath salts" or synthetic cannabinoids) and brand names of herbal smoke blend products. The most frequently named substances were spice (herb mixture), 1p-LSD and 2C-B. The majority of respondents reported having consumed NPS out of curiosity (63.4%), followed by the (presumed) legality of the substances (29.9%) and their better availability (23.1%).
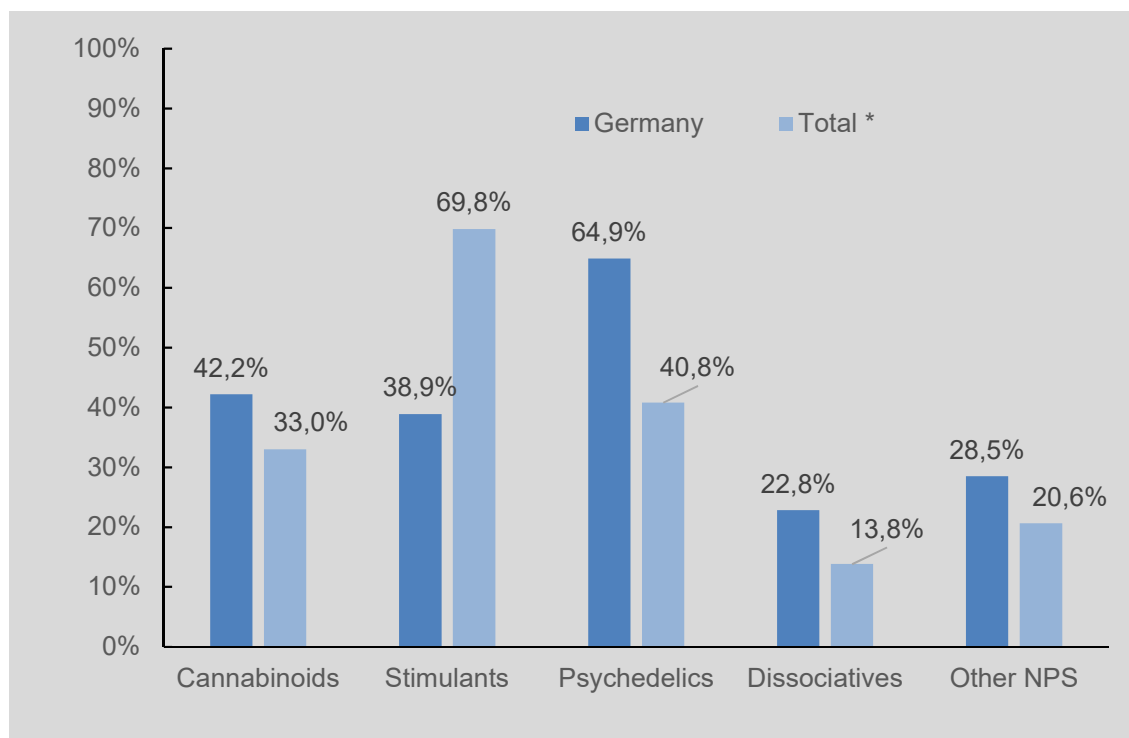
Due to the small size of the sample in 2018 in outpatient addiction support facilities, data from 2017 will be taken here. In 2017, data was collected on 160 persons from the participating outpatient addiction support facilities. Of the surveyed clients, 105 people reported the use of at least one new psychoactive substance. The most frequently reported use was MDPV (n = 23) and herb mixtures (n = 20). A total of 96 of the 134 uses can be attributed to the cathinone group. Furthermore, the consumption of synthetic cannabinoids was more frequently reported (n = 32). On the question as to reasons for use, curiosity was the most frequently cited at 48.6%. 22.9% reported consuming the substances on the grounds of price and 20% due to their good availability (Piontek und Hannemann, 2018).

Data was collected on 42 people in 2018 in the two correctional institutions that took part in the project. In Wittlich prison, NPS use was detected and documented by way of urine tests; in the other prison, data was collected by way of self-reporting. Overall, 40 people reported NPS use (or had a positive NPS urine test). Almost all NPS consumed could be attributed to the synthetic cannabinoids group, the most frequently consumed of which was, by some margin, spice (n = 13). Only the substance 1p-LSD, which was named once, does not fall into the synthetic cannabinoids group (Lochbühler und Hannemann, 2019).

Scientific studies on NPS generally concentrate on one group of users. Diverging from that was the transnational NPS project (NPS-t), a study carried out in six European countries (Germany, Hungaria, Ireland, the Netherlands, Poland and Portugal) (time period of the data collection, April to November 2016), which targeted the following three NPS user groups: (a) socially marginalised users: "high risk drug users," who often also frequently used opioids, (crack) cocaine and/or (meth) amphetamine intravenously or through smoking; (b) users in nightlife settings: recreational drug users who frequent clubs, raves and/or festivals; (c) users in online communities: users who are very active on the internet and/or actively participate in drug forums (Korf et al., 2019). The aim of the study was to create an overview of the characteristics of NPS users, of patterns and motives of use, of how NPS are obtained and of perceptions of prevention. The final sample consisted of 3,023 NPS users who had used in the previous 12 months, among which the online community sample was the largest (N=2,110), and the socially marginalised users sample the smallest (N=266). The German sample (N=663) consisted mainly of NPS users from the online community (81.7%) and nightlife users (14.8%). In all groups, the use of branded and/or pure stimulants in the last 12 months was the

most frequent (69.8%). Psychedelic NPS were ranked second (40.8%), followed by herb mixtures and/or synthetic cannabinoids (33%). The frequency of use of psychedelic NPS was higher among nightlife and online community users than among socially marginalised users. In contrast, socially marginalised users differentiated themselves from the nightlife and online community users through a higher 12-month prevalence of use of herb mixtures and/or synthetic cannabinoids. No difference could be established between the three groups in the use of dissociative NPS in the previous 12 months. In Germany, the 12-month prevalence in the use of psychedlics was the highest, while it was the lowest for dissociatives and other NPS (see Figure 8); in a comparison between countries, however, both of these categories were the most pronounced in Germany.

One of the largest practical difficulties observed in the survey was the fact that "NPS" is, for many users, not a clearly defined term. Consequently, there was a necessity to explain and define the term "NPS" to survey respondents - adjusted according to the group being studied and the country-specific conditions.

* Germany, Hungary, Ireland, the Netherlands, Poland and Portugal.

Figure 8   12-month NPS use (NPS-t-Projekt, 2016)

1.2   Harms related to NPS use (T1.2)

The data collected in the Phar-Mon NPS project also contains, for clients of outpatient addiction support facilities and for inmates of correctional institutions, information on subjective experiences of unwanted side effects of NPS use (Lochbühler und Hannemann, 2019, Piontek und Hannemann, 2018).

Due to the small size of the sample in 2018 in outpatient addiction support facilities, data from 2017 will be taken here. Of the 105 people in outpatient addiction support facilities who reported having used NPS, 65 (61.9%) reported having experienced unwanted side effects in the last 6 months. The side effects experienced included both physical and psychological problems. Cramps were named comparatively frequently (Piontek und Hannemann, 2018).

In total, 14 out of 40 persons (35%) in correction facilities reported having experienced unwanted side effects from NPS use. Stomach problems were frequently reported (nausea, vomiting), as well as cardiovascular complaints and impairments in perception and consciousness (Lochbühler und Hannemann, 2019).

Additional information on harms caused by NPS was collected in the Phar-Mon NPS project in cooperation with a poison information centre, (Giftinformationszentrale, GIZ). Poison information centres are informed by private individuals, hospitals and doctors about cases of poisoning. In 2018, 63 calls were documented due to poisoning from NPS, of which 32 were due to monodrug poisoning and 31 a combination of NPS with other (also legal) substances. With a total of 30 mentiones, synthetic cannabinoids represents the largest group. In addition, cathinone (12) and arylcyclohexylamine and phenetylamine (6 each) were among those named more frequently (Lochbühler und Hannemann, 2019).

1.3   Use of other drugs: Prevalence, trends and harms related to other drug use (T1.3)

In most representative population surveys and pupil surveys, use behaviour in relation to other drugs (e.g. LSD, psychoactive mushrooms, inhalants) is also recorded. These substances do not reach notable prevalence values among adults or adolescents.

In addition, information on the use of medicinal drugs is available. In the scope of the ESA 2018, the most commonly consumed medicinal drugs in the 30 days prior to the survey were painkillers (50.4%), followed by sleep-inducing drugs and tranquilisers (4.5%) and anti-depressants (4.2%) (Seitz et al., 2019c). Indications of medication dependence as per DSM-IV in the previous 12 months were exhibited by 4.0% of female and 3.1% of male respondents, and medication abuse by 7.4% of female and 8.2% of male respondents. Dependence and abuse as per DMS-VI were measured with the help of the M-CIDI.

2   Trends (T2)

Not applicable for this workbook.

3   New developments (T3)

3.1   New developments in the use of NPS and other drugs (T3.1)

No information beyond that reported above is available.

4 Additional information (T4)

4.1 Additional sources of information (T.4.1)

The project "HaLT - Hart am Limit" (approx. "HALT - Close to the limit") is a nationwide prevention project for children and adolescents with high risk alcohol consumption. It offers to children and adolescents, who have had to be treated on an inpatient basis as a result of an acute alcohol intoxication, as well as to their parents, counselling right there in the clinic. On the basis of the observation that in recent years increasing numbers of adolescents have been admitted to hospital with an intoxication caused by NPS or mixed use, this problem is given special attention in Bavaria, through the dedicated training of project staff. In this way, the intention is that the conversation strategy in an acute situation with adolescents who have consumed NPS (and alcohol) can be improved.

4.2 Further aspects of NPS and other drug use (T4.2)

In relation to the results on NPS use in the general population and in schools, indications are present that would suggest that the prevalence is possibly overestimated. It was noted, particularly in the scope of the MoSyD pupil survey, that the answers to the question as to use of other legal highs or research chemicals must still be viewed with extreme reservation, as to a large extent erroneous, nonsensical or no information at all was given (Werse et al., 2017a). Furthermore, according to the results of the current NPS-t study (for more detail see Section 1.1.1), a first limitation was the ambiguity of the term NPS. Consequently, a large practical challenge existed in finding a suitable definition for NPS. A common difficulty was that users themselves did not understand the definition of NPS. Careful data cleansing resulted in 6.5% of respondents who had initially been eligible to participate being excluded from the final sample, due to erroneous information. In view of these results it is not improbable that NPS use in prevalence studies, for example in school surveys or European barometer surveys, is too often over-stated (Korf et al., 2019).

Online, the website www.legal-high-inhaltsstoffe.de[5] has been working on the harm reduction of NPS use, since 2012, in that it lists the substances contained in NPS and provides areas for users and their parents and/or relatives as well as experts. It is based on an acceptance-oriented approach and offers reliable information (Benschop et al., 2017).

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[5]   Accessed: 18 July 2019.

SECTION E: SOURCES AND METHODOLOGY

1   Sources

In Germany, epidemiological data on drug use and drug users is available mainly on the basis of regular national, representative surveys and prevalence studies. These are complemented by mostly regional, quantitative and qualitative studies, which often focus on individual substances and/or specific user groups. Furthermore, pupil studies and surveys of specific sub-populations in which individual *Laender* or regions participate will also be described in the following.

National studies in the general population

Epidemiological Survey of Substance Abuse, ESA: The ESA is a combined written, telephone and online survey on the use of psychoactive substances and their consequences, their assessment as well as on other underlying data (Atzendorf et al., 2019). The study has been conducted every three to four years since 1980 on the basis of a representative sample of the resident population. Funded by the German Federal Ministry of Health (BMG), the survey has been conducted by the Institute for Therapy Research (Institut für Therapieforschung, IFT) in Munich since 1990. The target group has changed over time from adolescents and young adults in the age range of 12-24 (1980), 12-29 (1986) and 12-39 (1990) to the adult population of 18 to 59-year-olds (1995, 1997, 2000, 2003) and finally of 18 to 64-year-olds (2006, 2009, 2012, 2015, 2018). Some of the *Laender* have provided funding for a regional expansion of the sample to ensure an adequate statistical basis for *Land* specific analysis. The ESA sampling in 2018 was based on a two-stage, random selection process. Overall, the adjusted sample comprised 9,267 people, which corresponds to a net response rate of 41.6% (Atzendorf et al., 2019).

Drug Affinity Study, DAS: The DAS carried out by the BZgA investigates the use, motives for use and situational conditions of use with regard to tobacco, alcohol and illegal intoxicants among adolescents and young adults (age group 12-25 years) on a long-term basis. The study has been conducted every three to four years since 1973. In the 2015 study, a representative sample of 7,004 test persons was questioned by way of computer-assisted telephone interviewing (CATI). Compared to the last DAS, the current study has introduced two methodological innovations: firstly, the weighting of the data also took into account the education level of the respondents whilst secondly the survey was, for the first time, conducted not only via landline but also via mobile telephone (dual frame approach). The response rate of the landline sample amounted to 48.7%, whilst the mobile telephone sample was 32.0%. Crystal meth and NPS were added to the 2015 DAS as new substances (Orth, 2016).

In addition to the DAS, the BZgA has conducted representative surveys on cannabis use among 12 to 19-year-old adolescents and 12 to 25-year-olds every two to three years since 2007. From 2010 onwards, the surveys were conducted in the scope of the Alcohol Survey. In 2018, a representative sample of 7,002 adolescents and young adults was surveyed. The 2018

Alcohol Survey was carried out on a dual frame basis, in line with the 2014 and 2016 surveys. The response rate of the landline sample was 47.1% and of the mobile telephone sample was 30.9% (Orth und Merkel, 2019).

Pupil studies

European School Survey Project on Alcohol and Other Drugs, ESPAD: The ESPAD has been conducted every four years since 1995 in numerous European countries. The survey, initiated by the Pompidou Group at the Council of Europe and initially coordinated by CAN (Swedish Council for Information on Alcohol and Other Drugs, Stockholm) and since 2013 coordinated by the EMCDDA uses Europe-wide common standards for data collection. Germany participated in the ESPAD Study in 2003 at a federal level. A number of *Laender* took part in the subsequent surveys in 2007 and 2011. Bavaria was the only *Land* in which data was collected in the 2015 and 2019 surveys. In the course of the data collection, pupils from the cohort who reach their 16th birthday in the respective survey year (in Germany pupils of the 9th and 10th school year group in regular schools) were interviewed. For Germany, this enables data analysis by birth cohort as well as by school year. The data collection in Bavaria was undertaken in April 2015 as a written survey to classes of school pupils. In the 2015 survey the adjusted sample size in Bavaria was 2,034 pupils from 95 year groups, which corresponds to a response rate of 54.6% following data cleansing (Kraus et al., 2016). The last data collection in Bavaria took place in 2019; the results will be available from 2020.

SCHULBUS: In 2018 the pupil and teacher surveys on contact with addictive substances (SCHULBUS) among 14 to 18-year-old students were carried out in Hamburg (for the seventh time since 2004) and Bavaria[6] within the scope of the "Local Monitoring System" (LMS) at schools providing general or vocational education (unweighted sample Hamburg 2018: 1,033 14 to 17-year-old pupils). The survey was expanded on a one-time basis to the Hanseatic city of Bremen in 2005 and when it was repeated in 2016/17 it was expanded to the entire city state (unweighted sample 2016/17: 1,570 14 to 17-year-old pupils) (Baumgärtner und Hiller, 2017). The regions of Bavaria and Saxony that border the Czech Republic and a district of North Rhine-Westphalia on the Dutch border were included in 2015 due to indications of increasing use of methamphetamine in certain border regions. The SCHULBUS survey is not designed as a representative survey, rather it takes into account, both in the collection of data and in its analysis, regionally specific factors in order to be able to provide a foundation of data for strategies for action to local political decision makers, locally active addiction prevention professionals and above all teachers (Baumgärtner und Hiller, 2016). The tried and tested concept and related methodology of the SCHULBUS study was applied to the JEBUS survey in 2016/17 for the target group of 18 to 25-year-olds in Saxony, Bavaria and Hamburg. In total, more than 11,000 young adults were able to be surveyed in various German cities, with regards

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[6] The survey was carried out among 14 to 17-year-old pupils in Munich and Nuremburg, as well as in three Bavarian districts. The results will be reported on in the 2020 report.

to, among other things, their existing drug use experiences (Baumgärtner und Hiller, 2018). For detailed JEBUS results see the 2018 report.

Monitoring System Drug Trends, MoSyD, pupil survey: A source that has been continuously providing information on drug trends at a local level for many years is the MoSyD from Frankfurt am Main. The MoSyD is made up of several components: a representative pupil survey, a trend scout panel, a scene-based survey and an expert survey. As part of the MoSyD broad pupil survey, a representative sample of respondents in late adolescence (15 to 18) are surveyed. In 2018, the pupil survey was carried out for the fifth time by means of tablet computers and special software. In the current pupil survey, a total of 1,586 questionnaires were included in the analysis (based on all respondents from the 10th-12th grades or in the 1st-3rd years of a traineeship); 1,106 respondents were between 15 and 18 years old (Werse et al., 2019b).

Lower Saxony survey: Since 2013, the *Land* of Lower Saxony has been carrying out a regular, 2-yearly representative survey throughout Lower Saxony of 10,000 9th grade students, in cooperation with the Criminological Research Institute of Lower Saxony (Kriminologisches Forschungsinstitut Niedersachsen, KFN). One aim of the survey is to examine the hidden side of youth criminality (Bergmann et al., 2017). The focus of the survey is therefore on accounts from victims of violence, perpetrators of violence and perpetrators of property offences. Among other things, conditional factors of youth crime are also recorded, in addition to other types of deviant behaviour, such as for example truancy or drug use. The 9th grade has been selected for two reasons: on the one hand delinquent and deviant behaviour occurs in this age group relatively frequently and on the other, carrying out a representative study in this age group is economical, because almost all young pepole in this cohort are still obliged to attend school. The 2017 survey reached 8,938 students (2015: 9,512, 2013: 10,638). The response rate achieved was acceptable at 59.2%, although it was somewhat lower than the first two surveys (2013: 64.4% and 2015: 68.5%) (Bergmann et al., 2019).

Studies in specific sub-populations

Phar-Mon NPS: In 2015, the Phar-Mon NPS project was initiated, in which a monitoring system was implemented that enables a rapid and reliable identification of new developments as well as monitoring and reporting in relation to NPS use and use of medicinal drugs not according to their intended purpose (Piontek und Hannemann, 2017). For the area of NPS, information was available from surveys in cooperation with party projects, outpatient counselling centres and external addiction counselling in correctional institutions as well as one other prison which collected data on the use of NPS itself. Furthermore, data on poisonings was collected through the GIZs and the supply of and prices of NPS in online shops was analysed. Data collection in the course of cooperation with party projects took place via the respective prevention projects. A user questionnaire was laid out at project stands and filled out by visitors. In 2018, a total of 810 questionnaires could be included in the analysis. The cooperating addiction counselling facilities provided outpatient support services for clients with substance-related problems. In this respect, 160 clients who came to the counselling centres

due to NPS use were surveyed in 2017 as to their use behaviour, with the help of a questionnaire, frequently in the scope of a face to face conversation. Due to a problem in the course of the collection of the data, 2018 data for counselling centres is only available for a very small sample and will therefore not be reported. Information on NPS use in prisons was collected in collaboration with an institution which carried out external addiction counselling in a prison. In addition, data is available from one other prison which carried out its own project to analyse NPS use. In the scope of this counselling service, 28 inmates were questioned in 2018 on their use behaviour using structured guidelines. Information from urine tests and third-party observation from the other prison is available from 14 inmates (Lochbühler und Hannemann, 2019). The GIZs are the central contact partners for different types of poisoning. The affected individuals and the hospitals or doctors who have attended to patients with corresponding symptoms, deliver information to the centres on the affected persons and the substances which caused the poisoning. This data is documented by the staff. All GIZ-Nord (North GIZ) cases, where the poisoning was due to NPS, were included in the project (n = 77 enquiries, of which n = 63 mentions of NPS). From 2019 onwards, the project will be carried out in modified form.

Monitoring System Drug Trends, MoSyD, scene study: The scene study carried out in the scope of the Frankfurt MoSyD provides an insight into the current situation of the Frankfurt street drug scene, as it existed at the time the interviews were conducted, from the beginning of June to the end of July 2018 (Werse et al., 2019a). The surveys have been carried out every two years since 2002; in addition, an - externally funded - survey was carried out in 2003. In order also to be able to present long-term changes in the scene, an older 1995 study is also utilised, which used, in part, identical sets of questions. Topic areas of the survey are (1) practised patterns of drug use, (2) coping with everyday life, (3) state of health and (4) availment of drug support. In 2018, the MoSyD scene study was carried out for the third time using an electronic questionnaire loaded onto tablet computers. In order to ensure the greatest possible comparability with the previous surveys, the survey conditions have been kept as consistent as possible. This applies both to the survey instrument (standardised questionnaire) and survey period as well as the sample selection. As with the previous surveys, a total of 150 interviews were conducted. Of those, 62 respondents were recruited outside the low-threshold drug support facilities, i.e. directly in the street/drug scene; 88 respondents were approached in the contact areas of consumption rooms or other areas of low-threshold drug support. As a one-off additional module, a study on the characteristics of crack consumption in the Frankfurt street drug scene was carried out in 2017. 30 people (of whom 12 were women) from the scene of marginalised users of "hard" drugs were surveyed using qualitative interviews. The survey intensively examined the social situation, day-to-day life and underlying motives of crack users in Frankfurt (Werse et al., 2018).

2   Methodology

Basic terms

Experience with drugs means, in many cases, a one-off or infrequent use of drugs. After the drug has been tried, its use will often be ceased over time. Drug use at some point during a person's life (lifetime prevalence), which might date back 20 or even 30 years, is therefore only a rough indicator of the extent of drug use in the population at a given point in time. Accordingly, the lifetime prevalence is not suitable as an indicator for current changes, since it does not give any insight into the current use behaviour of the respondents.

Drug use in the 12 months prior to the survey (12-month prevalence) is a suitable indicator of current user numbers and is often cited in the relevant literature as a reference value. The 12-month prevalence is limited to a sufficiently manageable time frame of past consumption and provides interpretable, prevalence values. The 30-day prevalence measure of the use of illicit drugs, with the exception of cannabis, often only produces extremely low figures which are of little to no interpretable value. The clear difference in the overall population in Germany between prevalence over a lifetime, prevalence in the last 12 months and prevalence in the last 30 days shows that experimental or short-term use is the most common pattern of consumption.

"High risk drug use" (HRDU) is defined by the EMCDDA as the use of opioids, cocaine and/or amphetamines, by way of injecting or taken over a long time or regularly. The following characteristics are associated with these patterns of use:

- The use is recurrent;

- There are actual harms (negative consequences) for the person (e.g. dependence but also other health, psychological or social problems) or

- The use increases the probability/risk of the user suffering such harms.

In the reported data, the consumption of psychoactive substances (not including alcohol, tobacco and caffeine) according to high risk patterns of use (e.g. intensively, as far as frequency is concerned) and/or high risk routes of administration (e.g. injecting use) within the last twelve months is considered to be "high risk drug use".

Irrespective of the above definitions, use can also be classed as high risk even if only the user themselves experiences it as such and, for example, considers themselves as being dependent without an objective classification confirming this (Kleiber und Soellner, 1998). The working definitions used in various places respectively cover different subsets of the described overall group. Only the terms based on clinical classification systems are clearly defined.

The concept of "problem" or "high risk" use (including of cannabis) has been investigated in various surveys. However, the terminology and operationalisation of the respective concept differ from study to study, therefore comparability of information is only possible to a limited extent. It appears necessary, especially in the context of cannabis use, in light of the data available on the possible long-term consequences of intensive cannabis use, also to include

this use behaviour when looking at problem or high risk patterns of use. Several German studies employ the SDS (SDS; Gossop et al., 1995) based on the last 12 months' use (e.g. ESA, SCHULBUS) in order to obtain indications of clinically relevant patterns of use.

A detailed representation of the methodology for measuring and estimating high risk use can be found in Chapter 4.1 of the REITOX Report 2014 (Pfeiffer-Gerschel et al., 2014).

Estimates of prevalence and incidence of high risk drug use

The EMCDDA has compiled and further developed a series of methods for estimating the prevalence of high risk drug use at a national level. The selection of the target groups for these methods is based on the definition of high risk drug use as being "injecting or long-term/regular use of opioids, cocaine or amphetamines" (Kraus et al., 2003).

However, as it is not possible to avoid double counting in respect of the police figures for Germany, when looking at a number of substances, and as valid mortality estimates are only available for opioid users, the prevalence estimates for Germany, based on the three multipliers described below, were restricted to the target group of opioid users.

In view of the particular risks inherent to injecting drug use, this form of use is of considerable interest when trying to minimize secondary harm. In Germany, injecting use is still primarily associated with heroin, despite a slightly falling proportion of injecting use having been observed for some years amongst clients in addiction support facilities. The different user groups are differentiated according to primary drug in the estimates of prevalence just as in the description of clients treated, and not according to route of administration.

EMCDDA estimation methods (indirect estimates)

One multiplier method was recalculated for the 2018 reporting year, for which results were also available from the previous year:

▪   Estimate based on admissions to treatment

For this, the overall number of treated cases is first calculated using reported client numbers in outpatient and inpatient care as well as the total number of outpatient and inpatient addiction support facilities. On this basis, the total number of all opioid users requiring treatment is estimated with the help of a multiplier to reach the target group. Since some of the data that is needed for this estimation process (diagnostic data of patients in hospitals) is generally only made available after a considerable delay, the most recent estimate for this multiplier is based in each case on data one year older than the multiplier for drug-related deaths.

The estimate on the basis of drug-related deaths is not able to be carried out due to a change in the DSHS KDS for 2018. The total number of opioid users in the population is extrapolated from the figure for drug-related deaths for the year in the general population, through the use of a mortality estimate (calculated from the number of deaths in outpatient counselling).

The estimate reported in previous years on the basis of police contacts cannot be continued from 2016 onwards due to a change to the FDR, produced by the BKA. This estimate was based on assumptions of an "average duration of use" (8 to 10 years) and the number of heroin

users who have come to the attention of law enforcement for the first time (incidence), which are added up over the respective years. The proportion of drug-related deaths accounted for by persons already known to police is used in each case to calculate the estimated number of unknown cases.

All results should only be taken as rough approximations as different requirements must be taken into account. In particular, the multipliers employed, which are based on small numbers of cases and selective samples, only have limited relevance. All multiplier methods are subject in themselves to considerable limitations. Changes in prevalence rates, for example, are not necessarily reflected in the demand for treatment, the recording of users who come to the attention of law enforcement for the first time is significantly influenced by the prosecution pressure of the police and the absolute figures for drug-related deaths also only allow cautious interpretation. Other estimation methods (e. g. nationwide capture-recapture studies or other multiplier methods) have not been used since necessary parameters were not available in a timely, empirically supported form.

SECTION F: ANNEXES

1   Bibliography

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2   Tables

3   Figures