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0 SUMMARY

0.1 Summary of the Drugs workbook

0.1.1 Drug use in the general population

In Germany, epidemiological data on drug use and drug users is available mainly on the basis of repeated national, representative surveys. Several studies are 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 (AS; zuletzt Orth und Merkel, 2018) 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 (recently: Piontek et al., 2016a). Detailed results from the most recent Drug Affinity Study and Epidemiological Survey of Substance Abuse surveys (data year 2015) were already presented in the 2017 report.

Based on the most recent population survey of 2015, in Germany approx. 14.4 million adults between 18 - 64 (Gomes de Matos et al., 2016b) and 479,000 adolescents between 12 - 17 (Orth, 2016) have used an illicit drug at least once in their life (Table 1). This corresponds to a lifetime prevalence of 28.2 % 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 7.1 % and 7.5 % of 3.6 million and 352,000 adolescents respectively can be assumed. In the last 30 days, 3.4 % and 2.5 % or around 1.7 million adults and 117,000 adolescents have 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 6.1 % 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 amphetamine / methamphetamine¹ occurs very rarely in this age group. Among adults aged 18 - 64, amphetamine (1.0 %), new psychoactive substances (0.9 %) as well as ecstasy and cocaine / crack (0.6 % each) are the drugs, in addition to cannabis which have notable prevalence rates.

¹ In ESA 2015, epidemiological data on the consumption of methamphetamine in Germany were collected 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 2015	18 - 64	28.2 %	14,381,000
	DAS 2015	12 - 17	10.2 %	479,000
12-month	ESA 2015	18 - 64	7.1 %	3,621,000
	DAS 2015	12 - 17	7.5 %	352,000
30-day	ESA 2015	18 - 64	3.4 %	1,734,000
	DAS 2015	12 - 17	2.5 %	117,000

1) ESA Epidemiological Survey of Substance Abuse: The prevalence values for 2015 cannot be compared with those of earlier ESA surveys to ascertain trends over time due to changed weightings. 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 50,996,806 people between 18-64 years old and 4,693,587 people aged between 12-17 (as of 31Dec.2014; Statistisches Bundesamt).

Table 2 12-month prevalence of illicit drugs use in the general population, 2015

Source ¹⁾	Age	Any illicit drug	Cannabis	Drug other than cannabis ²⁾
Total				
ESA 2015	18 - 64	7.1 %	6.1 %	2.3 %
DAS 2015	12 - 17	7.5 %	7.3 %	1.3 %
Male				
ESA 2015	18 - 64	8.4 %	7.4 %	2.6 %
DAS 2015	12 - 17	8.4 %	8.1 %	1.3 %
Female				
ESA 2015	18 - 64	5.8 %	4.9 %	2.0 %
DAS 2015	12 - 17	6.5 %	6.3 %	1.1 %

1) ESA Epidemiological Survey of Substance Abuse. (DAS)

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

In the scope of the ESA 2015, in addition to use, indicators of clinically relevant and problem use were also recorded for cannabis, cocaine and amphetamines. On the basis of the very low prevalence rates at a population level, other illicit drugs were not taken into account. This information was recorded with the Severity of Dependence Scale (SDS), a short screening

instrument, in which respondents are asked about the presence of specific problems in connection with substance use. As this scale also records problems which are below the threshold of clinical diagnoses, the prevalence rates are higher than the estimates of substance related disorders reported by the ESA 2012 (Pabst et al., 2013).

According to the SDS criteria, 1.7 % of men and 1.1 % of women aged between 18 and 64 have a clinically relevant use of at least one of the illicit drugs included in the survey, in relation to the time period of the last 12 months (Gomes de Matos et al., 2016a). This produces an estimated total number of 714,000 affected people in Germany. The largest proportion of cases by far is problem use of cannabis, which 1.4 % of men and 1.0 % of women exhibited. For amphetamine / methamphetamine and cocaine, the prevalence rates were considerably lower at 0.2 % (men) and 0.3 % (women) and 0.2 % (men) and 0.1 % (women) respectively.

0.1.3 Drug use among school pupils, students attending vocational schools and students

In Germany a number of surveys are conducted with pupils which make information on substance use available. Of note is that these 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 available from four studies. A repeating pupil survey in Frankfurt am Main was conducted in 2017 / 2018 in the scope of the Monitoring System for Drug Trends (Monitoringsystem Drogentrends, MoSyd) (Kamphausen et al., 2018). In Bavaria, the German data collection for the European School Survey Project on Alcohol and Other Drugs (ESPAD; Kraus et al., 2016a) was performed in 2015. In Lower Saxony, a regular pupil survey – the Lower Saxony Survey – was continued in 2016 (Bergmann et al., 2017). The SCHULBUS survey was carried out 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 / 2017 on the substance use of 18- to 25-year-olds in vocational and higher education in Hamburg and cities in Bavaria and Saxony.

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 any illicit drug (27.1 %). Other illicit drugs were used by 11.1 % of the surveyed pupils. Comparable ratios are found in the other studies. In all pupil studies, male adolescents report a more frequent use of illicit drugs than female adolescents. Cannabis was also more frequently consumed than other illicit drugs among young adults in higher education and 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.

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					
Bavaria	13 - 19	Lifetime	27.1 %	25.2 %	11.1 %
SCHULBUS					
Hamburg	14 - 17	Lifetime	n.r.	23.3 %	5.5 %
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					
Frankfurt	15 - 18	12-month	n.r.	28 %	4 %
Frankfurt	15 - 18	Lifetime	n.r.	35 %	9 %
Lower Saxony Survey					
Lower Saxony	M = 14.9	12-month	n.r.	13.2 %	2.0 %
JEBUS Higher educ.					
Hamburg	18 - 15	Lifetime	n.r.	53.4 %	15.4 %
Bavaria	18 - 15	Lifetime	n.r.	48.1 %	12.1 %
Saxony	18 - 15	Lifetime	n.r.	52.3 %	17.7 %
JEBUS Vocational schools					
Hamburg	18 - 15	Lifetime	n.r.	51.8 %	23.9 %
Bavaria	18 - 15	Lifetime	n.r.	51.1 %	20.7 %
Saxony	18 - 15	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: 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

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).

0.1.4 Trends in drug use in Germany

The trend of use of any drug among both 12 to 17-year-olds and 18 to 64-year-olds has followed a wavelike pattern over the last 20 years (Piontek et al., 2016b). Following an increase in the prevalence rate from the early 1990s to 2003 and 2004 respectively, use then decreased again in the following years. Since 2011 and 2012 respectively, 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 general trend, with the prevalence markedly lower than among young adults. Another much lower prevalence level with a flatter curve can be observed in both of the 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 among young people in Figure 2, the developments over time are similar for men and women.

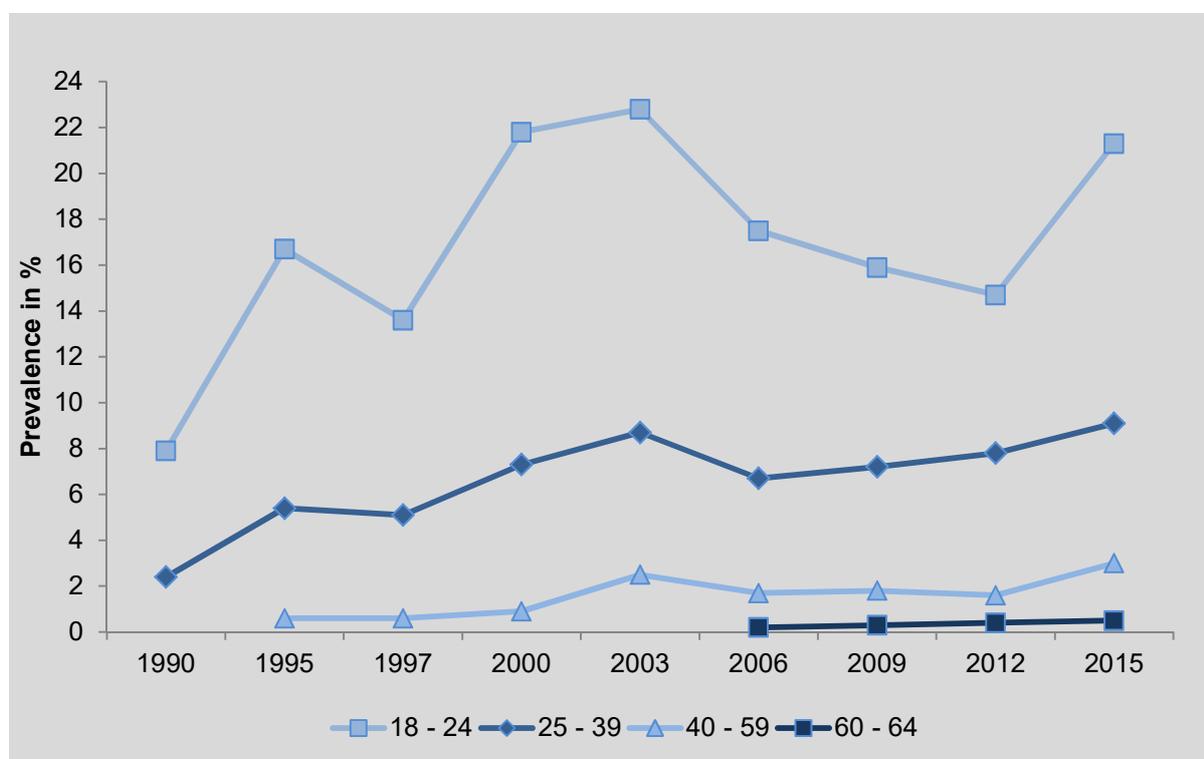


Figure 1 Trends in 12-month prevalence of use of any illicit drug among 18 to 64-year-olds in Germany, 1990 - 2015 (ESA) by age group

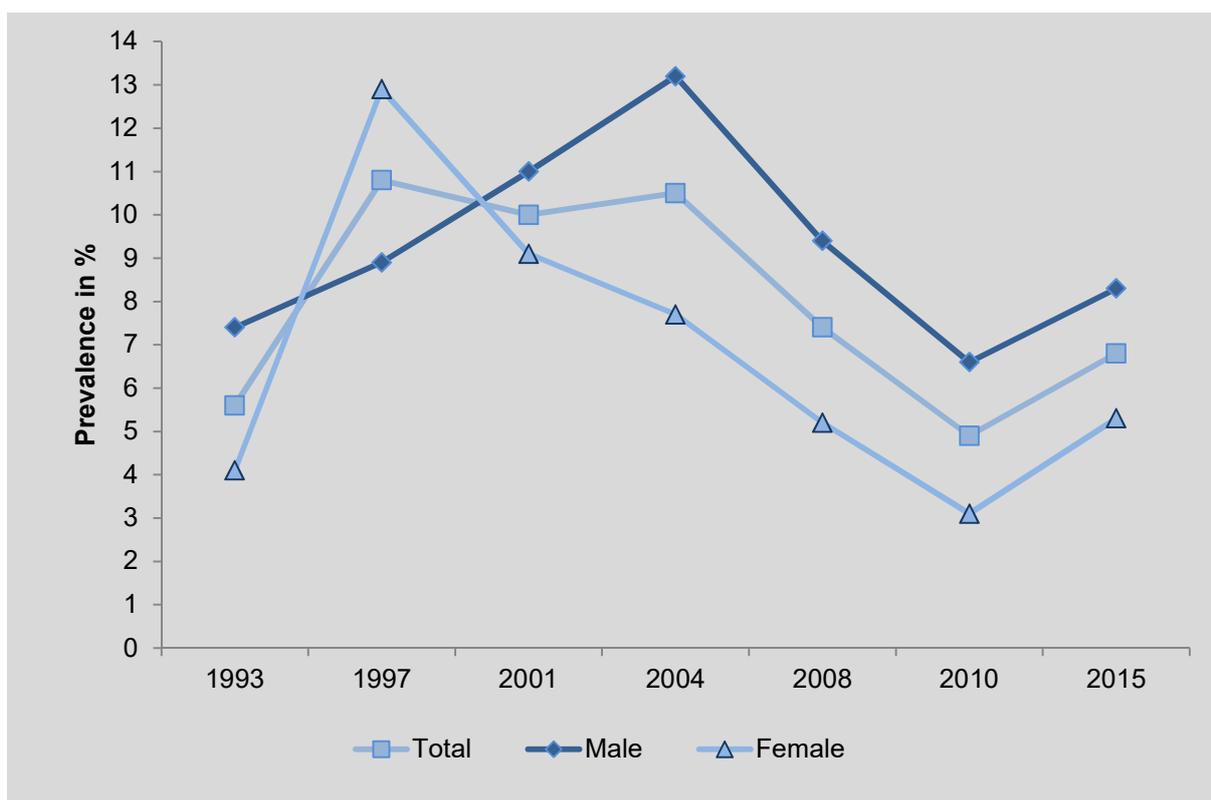


Figure 2 Trends in 12-month prevalence of use of any illicit drug among 12 to 17-year-olds in Germany, 1993 - 2015 (DAS) by gender

0.1.5 Other current aspects of illicit drug use in Germany

In the study by Hannemann et al. (2017) on substance use among visitors to music events, different groups (classes) of users were identified, with the help of latent class analysis, based on the 12-month prevalence of use of thirteen different substances. The conservative class hardly uses substances other than cannabis; the traditional class showed the highest prevalence for the classic party drugs cannabis, speed, ecstasy and LSD; a high proportion of the psychedelic class used, in addition to the classic party drugs, psychedelics such as LSD, ketamine and mushrooms and the unselective class used all substances covered. As far as the different patterns of use are concerned, the unselective class exhibited the most problematic use behaviour. In this respect, that group has both the highest frequency of use, and the highest probability of having taken, at some point, more than one substance at the same time.

0.2 The use of illicit drugs with alcohol, tobacco and prescription drugs

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

1.1.1 The relative importance of different products of cannabis

The data currently available in Germany in the general population and in schools does not usually allow any distinction to be drawn between different types of cannabis, since this information is not collected. Only in the MoSyD school survey in Frankfurt were those who had used cannabis in the previous 30 days subsequently asked which cannabis product they had consumed in this time period (Werse et al., 2017a). The majority of users (55 %) reported only having smoked marijuana or "grass", a further 32 % had consumed marijuana and hashish and 6 % only hashish ("don't know": 7 %).

1.1.2 Cannabis use in the general population

Cannabis is by some margin the most commonly used illicit drug in Germany. The proportion of people who have already consumed cannabis at least once in their lives is listed in Table 4 and is 27.2 % for adults aged between 18 and 64 years old (Gomes de Matos et al., 2016b) and 8.7 % for adolescents aged between 12 and 17 (Orth und Merkel, 2018). In relation to the last 12 months, 6.1 % of adults and 6.9 % of adolescents have consumed cannabis with the 30-day prevalence rates at 3.1 % 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 2015	18 - 64	27.2 %	31.8 %	22.6 %
	AS 2016	12 - 17	8.7 %	11.6 %	5.7 %
12-month	ESA 2015	18 - 64	6.1 %	7.4 %	4.9 %
	AS 2016	12 - 17	6.9 %	9.3 %	4.5 %
30-day	ESA 2015	18 - 64	3.1 %	4.0 %	2.3 %
	AS 2016	12 - 17	1.5 %	2.2 %	0.8 %

1) ESA Epidemiological Survey of Substance Abuse. AS Alcohol survey.

Over the time period of the last 25 years, the prevalence of cannabis use among 18 to 64-year-old adults, has exhibited, with a wavelike pattern, an overall upward trend. The pattern of each age group is shown in Figure 3: The prevalence increased significantly in particular

in the youngest age group, 18 to 24-year-olds, from 7.7 % in 1990 to 20.6 % in 2015 (Piontek et al., 2016b). The highest proportion of cannabis users was seen in 2003.

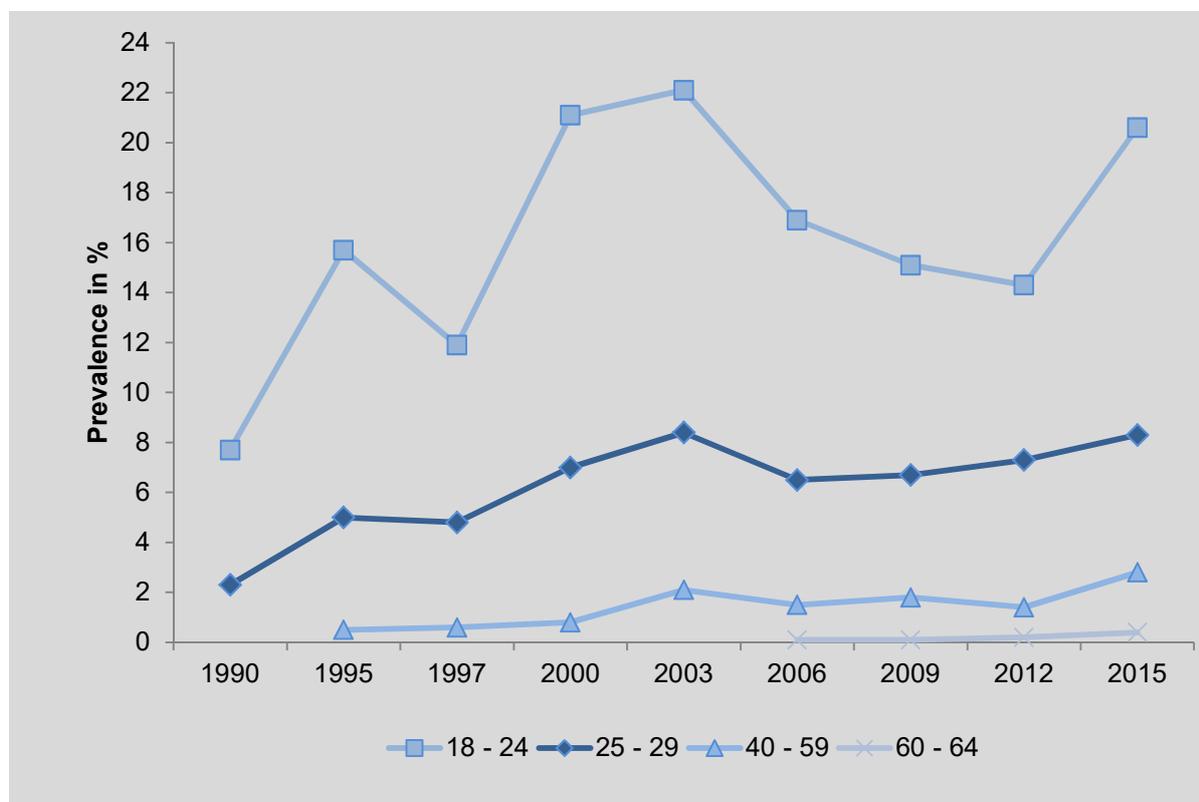


Figure 3 Trends in 12-month prevalence of cannabis use among 18 to 64-year-olds in Germany, 1990 - 2015 (ESA) by age group

A similar trend in the prevalence of cannabis use can be observed among 12 to 17-year-olds (Orth und Merkel, 2018). The highest 12-month prevalence rate in this age group was recorded in 2004 (10.2 %) (see Figure 4). Following a drop since then to 4.6 % in 2011, it once again reached a high prevalence of 7.7 % in 2014. Between 2014 and 2016, the proportion of users fell to 6.9 %. Since the beginning of the 2000s, the trends for both genders have been parallel for adolescents also.

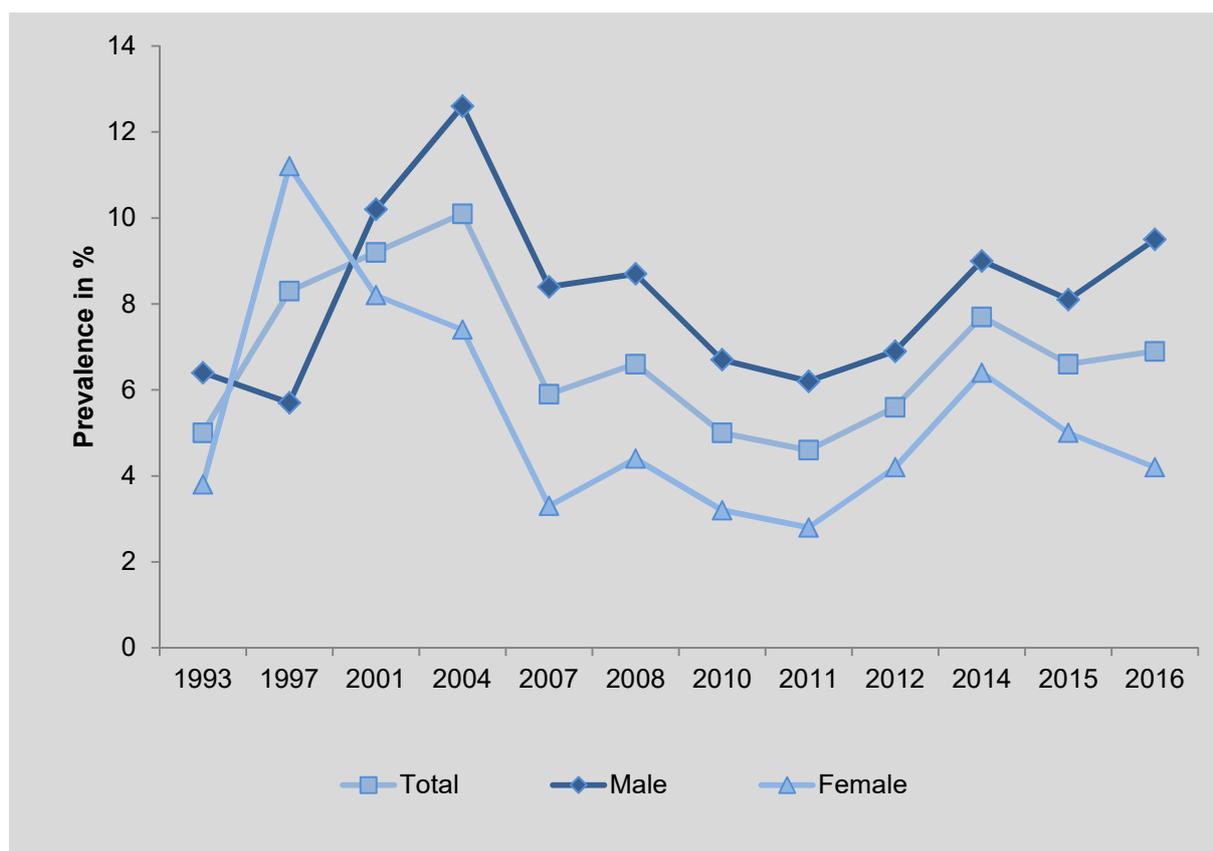


Figure 4 Trends in 12-month prevalence of cannabis use among 12 to 17-year-olds in Germany, 1993 - 2016 (DAS; AS)

1.1.3 Cannabis use in school and other sub-populations

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 prevalence of use. New results are only available for one of the repeated studies described.

In the most recent 2017 Frankfurt MoSyD survey, 35 % of 15 to 18-year-olds reported having used cannabis at least once in their life (Kamphausen et al., 2018). In the last 12 months this figure was 28 %. Among all prevalence rates, school boys still have a markedly higher rate than school girls. After an increase in lifetime prevalence of cannabis use among Frankfurt school children between 2011 and 2015, the decreasing trend in use then continued strongly following peak. The same is true for the 12-month prevalence.

Table 5 Prevalence of use of cannabis in 2015 - 2017 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 2015					
Hamburg	14 - 17	Lifetime	23.3 %	26.0 %	20.4 %
		30-day	11.8 %	15.2 %	8.4 %
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 2017					
Frankfurt	15 - 18	Lifetime	35 %	45 %	35 %
		12-month	28 %	38 %	23 %
Lower Saxony Survey 2016					
Lower Saxony	M = 14.9	12-month	13.2 %	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, young adults aged between 18 and 25 were recruited in different German large cities (Hamburg and cities in Bavaria and Saxony). Across all regions surveyed, around one in two young adults reported having used cannabis at least once in their lives (Table 6). One in five respondents on average reported a corresponding use in the last 30 days. Consumption was more widespread among men than women. The experience of use of higher education students on the one side and vocational students on the other were largely similar. Regional differences were found, in that young adults in Hamburg tended to have higher prevalence rates than respondents in Bavaria and Saxony.

Table 6 Prevalence of use of cannabis in 2016 - 2017 among higher education and vocational students

Source ¹⁾	Age	Time reference	Total Prevalence	Male Prevalence	Female Prevalence
JEBUS Higher education					
Hamburg	18 - 25	Lifetime	53.4 %	54.7 %	52.1 %
		30-day	22.1 %	22.9 %	22.1 %
Bavaria	18 - 25	Lifetime	48.1 %	54.4 %	41.8 %
		30-day	14.2 %	18.4 %	10.2 %
Saxony	18 - 25	Lifetime	52.3 %	56.9 %	48.0 %
		30-day	21.6 %	26.0 %	17.3 %
JEBUS Vocat. schools					
Hamburg	18 - 25	Lifetime	51.8 %	63.2 %	40.2 %
		30-day	21.2 %	27.7 %	14.6 %
Bavaria	18 - 25	Lifetime	51.1 %	56.9 %	45.3 %
		30-day	17.0 %	22.4 %	11.5 %
Saxony	18 - 25	Lifetime	51.1 %	54.0 %	48.3 %
		30-day	19.0 %	25.5 %	12.4 %

1) JEBUS Young adults: Survey on Contact with Addictive Substances.
(Baumgärtner and Hiller, 2018).

Cannabis use in specific sub-populations

A large acceptance of cannabis can also be seen from the survey carried out in the scope of Phar-Mon NPS project on visitors to electronic music events (Piontek und Hannemann, 2018). With a 12-month prevalence of 72.6 %, cannabis is the most commonly used illicit substance by some margin.

In 2016, the scene study carried out in the scope of the MoSyD investigated substance use in the open drug scene in Frankfurt (Werse et al., 2017). At 92 %, nearly all respondents had experience of cannabis. The 12-month prevalence rate was 65 % and has thus, following a survey peak in 2014, fallen once again. As far as the 30-day prevalence is concerned, the starting value from 1995 is higher than the values from subsequent surveys; in the meantime, the prevalence has fallen to the current lowest value of all surveys (51 %). In comparison to the most recent survey, cannabis use within the previous 24 hours has also fallen, to 26 %.

1.2 Patterns, treatment and problem / high risk use

1.2.1 Patterns of cannabis use

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, 2018). 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 1.5 %. The prevalence of regular cannabis use (male: 2.2 %; female: 0.8 %) increased statistically significantly among male as compared to female adolescents. Furthermore, regular cannabis use among boys has increased since 2010, whereas among girls it has fallen.

For pupils in Frankfurt, the proportion reporting intensive (daily) use has fallen to 1 % from the previous year (3 %) (Kamphausen et al., 2018). The proportion of more frequent users – those that have used cannabis at least ten times in the last 30 days – has also fallen (2 % in 2017 vs. 7 % in 2016).

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 is assumed where an individual has a score of 2 or more. Across all three Länder 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

Specialist counselling and treatment of the secondary harm from cannabis use in Germany is, for the most part, provided on an outpatient basis. Inpatient admittance and treatment 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 with all other 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 2017 Treatment workbook.

The data of 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

Based on data from the ESA 2015 and extrapolated to the German population, there are, in the age group 18 to 64 years old, estimated to be around 550,000 people (300,000 men and 250,000 women) with clinically relevant cannabis use according to SDS (Gomes de Matos et

al., 2016b). This corresponds to a 12-month prevalence of 1.4 % and 1.0 % among men and women respectively. Since 2006, the prevalence of clinically relevant cannabis use has remained unchanged for both sexes (Kraus et al., 2016).

In the scope of the ESPAD study in Bavaria, problem cannabis use was recorded by means of the Cannabis Abuse Screening Test (CAST), with a total of six unfavourable patterns of use surveyed (Kraus et al., 2016a). Overall, CAST established problem cannabis use for 1.6 % of the overall sample, and 7.6 % of the 12-month-users. Compared to the 2011 survey, there were no changes in the prevalence of cannabis related problems. The majority (85.8 %) of adolescents who had consumed cannabis in the previous 12 months reported not having experienced any of the symptoms or problems included in the CAST. Memory problems in connection with the use of cannabis were reported by around 30 % of the 12-month-users. Unfavourable patterns of use (cannabis use alone or already using in the morning) were more frequently reported by just under 10 %.

In the SCHULBUS survey, cannabis dependence is defined by reaching a threshold of 2 points on the SDS (Baumgärtner und Hiller, 2016). In relation to all adolescents surveyed in 2015, 6 % of them could therefore be classed as cannabis dependent. This affects male adolescents and older respondents more strongly. Trend analyses for Hamburg indicate that the proportion of those affected has slightly increased among both genders since 2007, irrespective of age.

A subjective estimation of dependence is used in the Frankfurt MoSyD survey. This is based on the question of whether the pupils are of the opinion that they are currently dependent on one or more drugs (Werse et al., 2017a). Overall, 2 % of respondents reported that they were dependent on cannabis. The proportion of users who were, in their own estimation, dependent on cannabis has fallen in comparison to the previous year.

in the Lower Saxony pupil survey, problem cannabis use is defined as at least repeated monthly use (Bergmann et al., 2017). The proportion of affected pupils in the current survey was 4.1 % and has therefore increased in comparison to 2013. Boys, pupils from lower types of school and migrants use cannabis more frequently in problematic ways. Problem use has significantly increased in these groups in particular.

1.2.4 Synthetic cannabinoids

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

Of the 9th and 10th grade pupils surveyed in Bavaria, 5.9 % had used NPS in the last 12 months in the form of herb mixtures (Kraus et al., 2016a). Almost every tenth secondary general school pupil used herb mixtures in the last year, in comparison to 3.1 % of grammar

school pupils and 6.7 % of intermediate secondary school pupils. Boys smoke herb mixtures somewhat more often than girls (6.5 % v. 5.2 %).

In the Frankfurt MoSyD survey in 2015, a total of 6 % of the 15 to 18-year-old respondents reported having consumed a herbal smoke blend at least once in their life (Werse et al., 2017a). For 1 % this was also the case for the previous 30 days. 2 % of adolescents reported a use of more than five times in their lives. The lifetime prevalence of use of herbal smoke blends has remained unchanged from the previous years and thus is below the 2009 - 2012 values. A slightly decreasing trend was found for the 30-day prevalence, while no change was seen in the more than five times use (Kamphausen et al., 2018).

2 TRENDS

Not applicable for this workbook.

3 NEW DEVELOPMENTS

3.1 New developments in the use of cannabis

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

4.1 Additional sources of information

In a study based on the repeated surveys of a Lower Saxony pupil survey, Baier et al. (2016) investigated the causal connection between cannabis and alcohol consumption and delinquent behaviour. In an initial observation of the development of substance use over time in the cross-sectional surveys since 2007 / 2008, it is initially apparent that problem cannabis use in particular has increased in recent years. This development varies significantly from other substance use indicators, which show a steady decline. Additionally, a longitudinal study with 1,269 ninth and eleventh grade pupils was conducted. According to that, a later use of cannabis in the eleventh grade can be predicted by the consumption of alcohol and cigarettes as well as the committing of property damage at a younger age. No significant connection was found between cannabis use and delinquent behaviour such as shoplifting, property damage and violent behaviour. However, the use also did not reduce such behaviour, as several authors assume, on the basis of the dulling effect of cannabis.

Morgenstern et al. (2017) investigated whether the use of psychotropic substances was connected to educational satisfaction. For this purpose, a written survey was conducted among 5,688 trainees in their first year, from 49 vocational schools. Bivariate analyses

showed that greater satisfaction with the training was seen among trainees who stated that they did not use cannabis at all or only rarely, or who were below the cut-off for problem use. In the final multivariate model, cannabis use was, however, no longer a significant predictor. The only remaining important factors were what care at work and school was availed of, the working environment, the assessment of the skilled profession and problem alcohol use.

4.2 Further aspects of cannabis use

No information on further aspects of cannabis use is available.

SECTION B. STIMULANTS

1 NATIONAL PROFILE

1.1 Prevalence and trends

1.1.1 The relative importance of different stimulant drugs

Among stimulants in Germany cocaine and amphetamines are the dominant substances. 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 amphetamines, 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 both the counselling / treatment realm and from 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

Table 7 offers an overview of the use of stimulants in the general population (adolescents and adults) (3.8 %) (Gomes de Matos et al., 2016b). The lifetime prevalence for ecstasy use is equal to that of amphetamine at 3.3 %. With a prevalence of 0.6 %, methamphetamine plays a subordinate role. In relation to use in the last 12 months and 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 and 30-day prevalence rates which indicates mainly experimental use. For all substances, the prevalence values stated for men are much higher than those for women.

Table 7 Prevalence of use of stimulants in Germany

	Source ¹⁾	Age	Total Prevalence	Male Prevalence	Female Prevalence
Amphetamine					
Lifetime	ESA 2015	18 - 64	3.3 %	4.2 %	2.5 %
	DAS 2015	12 - 17	0.3 %	0.6 %	0.1 %
12-month	ESA 2015	18 - 64	1.0 %	1.3 %	0.8 %
	DAS 2015	12 - 17	0.3 %	0.5 %	0.0 %
30-day	ESA 2015	18 - 64	0.5 %	0.6 %	0.5 %
	DAS 2015	12 - 17	n.r.	n.r.	n.r.
Methamphetamine					
Lifetime	ESA 2015	18 - 64	0.6 %	0.7 %	0.5 %
	DAS 2015	12 - 17	0.0 %	0.0 %	0.0 %
12-month	ESA 2015	18 - 64	0.2 %	0.2 %	0.2 %
	DAS 2015	12 - 17	0.0 %	0.0 %	0.0 %
30-day	ESA 2015	18 - 64	0.1 %	0.0 %	0.1 %
	DAS 2015	12 - 17	n.r.	n.r.	n.r.
Ecstasy					
Lifetime	ESA 2015	18 - 64	3.3 %	3.7 %	2.9 %
	DAS 2015	12 - 17	0.6 %	0.7 %	0.5 %
12-month	ESA 2015	18 - 64	0.6 %	0.7 %	0.6 %
	DAS 2015	12 - 17	0.5 %	0.6 %	0.5 %
30-day	ESA 2015	18 - 64	0.2 %	0.2 %	0.2 %
	DAS 2015	12 - 17	n.r.	n.r.	n.r.
Cocaine / Crack					
Lifetime	ESA 2015	18 - 64	3.8 %	5.0 %	2.5 %
	DAS 2015	12 - 17	0.5 %	0.2 %	0.8 %
12-month	ESA 2015	18 - 64	0.6 %	0.8 %	0.5 %
	DAS 2015	12 - 17	0.3 %	0.1 %	0.6 %
30-day	ESA 2015	18 - 64	0.2 %	0.2 %	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 time 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 1.0 % in 2015 (Piontek et al., 2016b). Cocaine use has also increased in the same time period, from 0.3 % to 0.6 %. However a peak prevalence rate of 1.0 % was reached in 2009. In relation to ecstasy, between 1995 and 2012 a decline was initially observed from 0.8 % to 0.4 %. In 2015, the prevalence increased again to 0.7 % (see Figure 5).

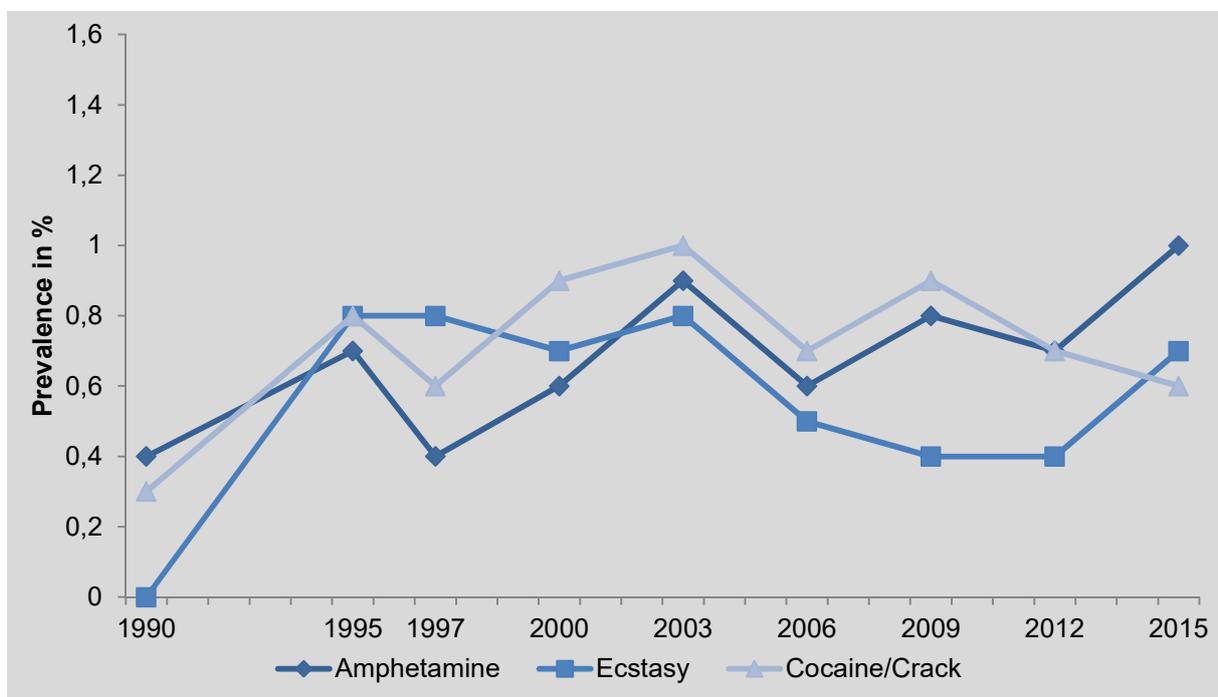


Figure 5 Trends in 12-month prevalence of stimulant use among 18 to 59-year-olds in Germany, 1990 - 2015 (ESA)

The use of amphetamines, cocaine and ecstasy has decreased among 12 to 17-year-old adolescents (Figure 6). 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.

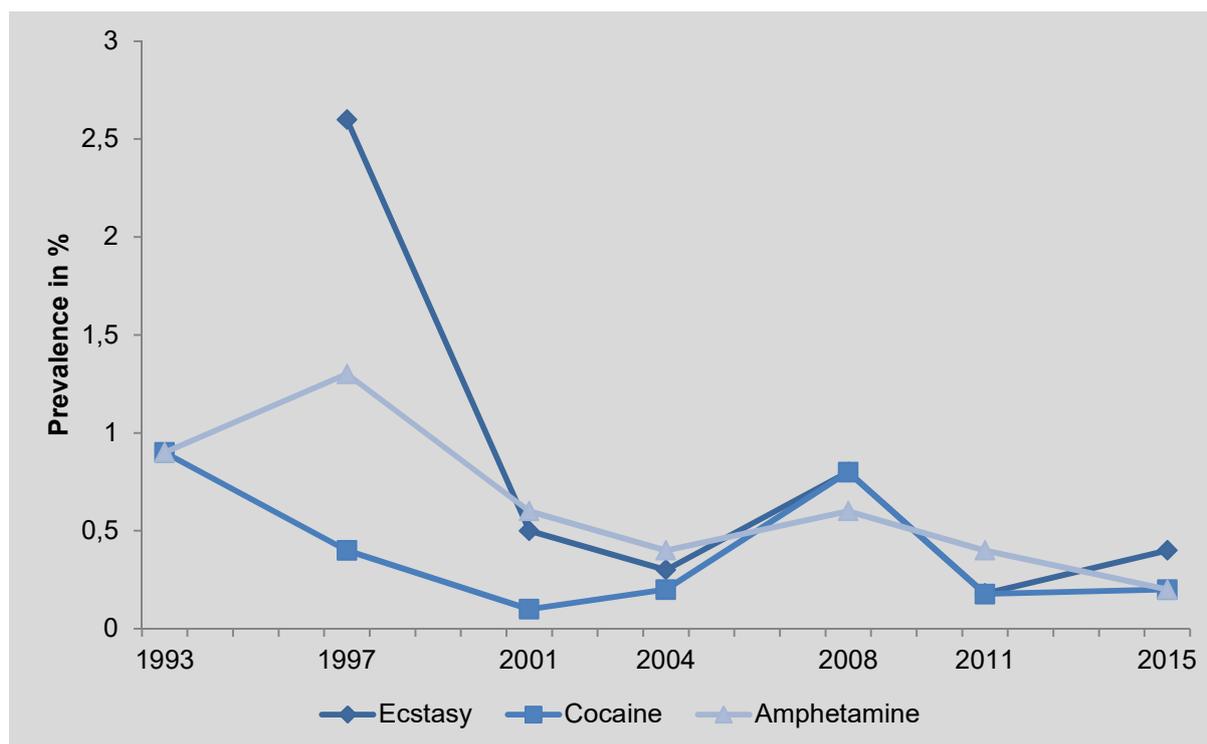


Figure 6 Trends in 12-month prevalence of stimulant use among 12 to 17-year-olds in Germany, 1990 - 2015 (DAS)

1.1.3 Stimulant use in school and other sub-populations

Stimulant use in schools

An overview of stimulant use among school pupils can be found in Table 8. Almost 3 % of Bavarian pupils have had experience with amphetamine (2.8 %) and ecstasy (2.7 %) (Kraus et al., 2016a). Furthermore, cocaine had 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 particular in comparison to 2011, the use of amphetamines has significantly decreased in Bavarian schools. There were no changes in respect of ecstasy and cocaine.

In all *Laender* studied as part of the SCHULBUS survey, aside from Saxony, the highest prevalence rates were seen for ecstasy, at between 2.5 % and 3.0 %, (Baumgärtner und Hiller, 2016). Amphetamines followed in second place. In Saxony, cocaine represents the most popular stimulant with a lifetime prevalence of 1.3 %. The lowest prevalence rates were found for methamphetamine. This substance is most prevalent in Bavaria, compared to the other regions surveyed.

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, crystal meth use among vocational students is significantly more prevalent than among higher education students of the same age. In Saxony, almost one in 20 surveyed students in vocational education had tried crystal meth 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.

Ecstasy and cocaine, with a lifetime prevalence for each of 4 %, were the most prevalent stimulants in the Frankfurt MoSyD study also (Kamphausen et al., 2018). In keeping with the other pupil studies, methamphetamine has a low significance (1 %). Over time, following an increase in use of ecstasy up to 2015, a significant decrease of three percentage points has been seen. The lifetime prevalence of cocaine fell to its lowest level of all surveys in 2016, followed by a 2 % increase in 2017 which returned it to 2015 levels. No changes were seen in relation to methamphetamine.

Table 8 Prevalence of stimulant use among pupils in 2016 / 2017

Source ¹⁾	Age	Substance	Total Prevalence	Male Prevalence	Female Prevalence
ESPAD					
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					
Hamburg	14 - 17	Amphetamine	2.7 %	n.r.	n.r.
		Methamph.	0.5 %	n.r.	n.r.
		Ecstasy	2.8 %	n.r.	n.r.
		Cocaine	1.9 %	n.r.	n.r.
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					
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 <i>Laender</i>	18 - 25	Methamph.	2.7 %	3.6 %	1.7 %
JEBUS Higher education					
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 <i>Laender</i>	18 - 25	Methamph.	1.0 %	1.2 %	0.8 %
MoSyD					
Frankfurt	15 - 18	Speed	3 %	6 %	3 %
		Methamph. (crystal meth)	1 %	<1 %	<1 %
		Ecstasy	4 %	7 %	3 %
		Cocaine	4 %	3 %	1 %

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 large role among visitors of electronic music events (Hannemann et al., 2017). With 12-month prevalence rates of 63.5 %, 59.5 % and 40.3 % respectively, ecstasy, speed and cocaine are the most frequently consumed substances after cannabis. The 30-day frequency is the highest for speed (4.5 days), followed by ecstasy (3.8 days) and cocaine (2.3 days of use).

1.2 Patterns, treatment and problem / high risk use

1.2.1 Patterns of stimulant use

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 (Gomes de Matos et al., 2016b). For ecstasy, the proportion is 93.2 %, for cocaine / crack 91.2 % and for amphetamine 85.9 %. The largest proportion of this use is of cannabis (75.8 % to 86.7 %). However the other stimulants also play a large part. The average age of first use for amphetamine (19.6) and ecstasy (19.9) is significantly lower than for cocaine / crack (22.5). Among the majority of 12-month users, use is limited to a maximum of 5 instances of use. The highest proportion for occasional use is 68.9 % for cocaine, the lowest is for amphetamines at 47.1 %. <1 % of ecstasy users reported a frequent use of at least 100 occasions, 1.8 % of cocaine users, 2.5 % of methamphetamine users and 17.0 % of amphetamine users.

In Bavaria, only very few pupils have ever consumed a stimulant (Kraus et al., 2016a). If a substance was tried at all, it almost always remained between one and a maximum of five uses (experimental drug use). The percentage rates related to such experimental use amounted to between 0.2 % for methamphetamine and 2.0 % for amphetamine. The proportion of those who had consumed a stimulant on more than five occasions is under 1 %. Girls and intermediate secondary school pupils reported less frequent use. Secondary general school pupils were the pupils who most often reported a frequent use. The average age of first use of amphetamine / methamphetamine and cocaine / crack is slightly below that for ecstasy. The majority of surveyed adolescents assessed the obtainability of stimulants as rather difficult or the pupils did not know where and how they could obtain these drugs.

1.2.2 Treatment: stimulants

Since December 2016, the so-called S3 methamphetamine guideline in Germany has been the first treatment guideline in the world for patients with methamphetamine related disorders, which fulfils the highest quality criteria of an S3 guideline (Die Drogenbeauftragte der Bundesregierung et al., 2016). This was developed by the German Agency for Quality in Medicine (Ärztliches Zentrum für Qualität in der Medizin, ÄZQ) together with an interdisciplinary expert group. It is intended to provide the relevant professional groups certainty in the actions when dealing with acutely intoxicated or dependent patients. The basis for the guideline is the reviewing and assessment of internationally available literature on the topic. 135 recommendations were derived in particular for acute and post-acute treatment as well as the treatment of comorbidities and special patient groups.

In Saxony-Anhalt the Landesstelle für Suchtfragen im Land Sachsen-Anhalt e.V. (2016) compiled data from the recognised addiction counselling facilities and the *Land* Statistics office, in order to present the trend in the care of stimulant problems with special focus on methamphetamine. From the numbers, it was clear to see that over the last 10 years there has been an increase in treatments in the area of stimulant use. This increase however has not been so steep between 2014 and 2015. A comparable development in case numbers can be seen for patients discharged from in-patient care in hospital with a drug diagnosis. The number of treatments for stimulant use among 14 to 17-year-olds and among 22 to 35-year-olds more than doubled from 2012 to 2015. In 2012, people under 14 but also people over 50 were treated for the first time for crystal meth problems. The proportion of females seeking

advice for stimulant problems has remained constant over the years at around a third. Based on the experiences of recent years, several principles have been developed for the work in addiction counselling facilities: (1) stop prevalence of use as far as possible, prevent unintentional "advertising effects", (2) reach those affected as early as possible and (3) protect children.

1.2.3 High risk stimulant use

With the use of the refined estimation method on the basis of the 2016 treatment data (for an outline of the estimation method see section E1.2), estimates were calculated exclusively for the target group of clients with cocaine and stimulant problems (F14 and F15 codes according to ICD-10). This resulted in an estimated number of 88,000 - 105,000 (2015: 85,000 - 101,000). The estimates are at 1.6 - 1.9 (per 1,000 population) among 15 to 64-year-olds. Over the last ten years, this value saw a significant and continuous increase, with exceptions in 2007 and 2009, when a slight decrease was recorded compared to the previous year. Estimates based on numbers of deaths are not produced for this target group due to the problems mentioned in section E1.2.

The latest ESA survey (2015) revealed a clinically relevant use of amphetamine and / or methamphetamine in the last 12 months for 0.2 % of 18 to 64-year-old respondents (Gomes de Matos et al., 2016b). This corresponds to a total of 102,000 people. The estimated values of clinically relevant use of cocaine are of a comparable level (0.2 % or approx. 102,000 people affected).

1.2.4 Synthetic cathinones

Specific information on the use of synthetic cathinones is only available from the Frankfurt MoSyD scene study (Werse et al., 2017). In that, 5 % of respondents from the open drug scene reported having already tried NPS stimulants at some point (cathinone, "bath salts" and others). Based on the last 12 months, the prevalence was 1 % and only one respondent had consumed a stimulating NPS in the previous 30 days.

1.2.5 Injecting and other routes of administration

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

In the scope of the MoSyD scene study in Frankfurt, the users in the open drug scene were also asked about the route of administration (Werse et al., 2017). In 2016, 57 % of respondents reported exclusively smoking crack, 16 % solely injected the substance and 28 % consumed the cocaine derivative both by injection and inhalation. The exclusive use by way of smoking, after a comparatively significant increase in 2003, declined up to 2010 and since 2012 then considerably increased again. In contrast, injecting use alone has fallen again after the sharp increase in 2006. The general injecting use of crack has simultaneously fallen further and at 43 % is at the lowest level since the surveys were started. Overall, the practised routes of administration of crack are thus shifting over to smoking use, which is

now very clearly the most frequently practised type of use. No significant gender differences have been established for crack, although men more frequently exclusively inject. Overall, females smoke crack at least occasionally, somewhat more frequently than male respondents.

The routes of administration in relation to cocaine have also significantly changed over time: after 2002, injecting use significantly increased as nasal use clearly declined in parallel. In the subsequent years, this distribution has only changed a little. In 2012, however, there was a marked decline in injecting and at the same time a notable increase in nasal use recorded. This development is currently continuing; injecting use has reached the lowest level since the beginning of the surveys with nasal use reaching its highest level. That being said, the relatively low number of cases should be taken into account.

1.2.6 Infectious diseases

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

2 TRENDS

Not applicable for this workbook.

3 NEW DEVELOPMENTS

3.1 New developments in the use of stimulants

Current data on the use of stimulants as well as the development in recent years is explained in B1.1.1. No additional information is available on new developments.

4 ADDITIONAL INFORMATION

4.1 Additional sources of information

Due to the increasing take up of addiction support for methamphetamine related problems in central Germany, a project was carried out in this region which examined the requirements of the increased care needs, the associated challenges and potential for optimisation (Hoffmann et al., 2017). Therefore, qualitative, structured interviews were conducted, as well as inter-profession focus groups with patient care experts (outpatient counselling centres, acute care, rehabilitation). The results show firstly, in line with international literature, that methamphetamine users are overall a very heterogeneous target group, which places different demands on needs-based care. Parents with children, women and pregnant women were identified as particularly relevant groups. Particular challenges to the addiction support

system are presented above all by numerous comorbidities, in particular psychological disorders. The key barriers and deficits named by the respondents related to long waiting times, too short treatment times, a lack of financial and personnel resources, motivational barriers and not sufficiently tailored treatment and counselling concepts. Furthermore, communications problems were emphasised, which had significance primarily in the form of a lack of exchange of information between different sectors as well as multi-dimensional problems in communicating with the pension insurance funds. Optimisation potential was seen in particular with respect to more flexible therapy models and the creation of more outpatient rehabilitation services.

4.2 Further aspects of stimulant use

There is currently no further information available on stimulant use.

SECTION C: HEROIN AND OTHER OPIOIDS

1 NATIONAL PROFILE

1.1 Prevalence and trends

1.1.1 The relative importance of different opioid drugs

In the context of illicit drugs, the use of opioids in Germany is largely identical to the use of heroin or possibly substances which are employed in the scope of substitution based treatment (Polamidon, methadone, buprenorphine). One regional peculiarity seems to be in the use of the synthetic opioid, "fentanyl", which is clearly mainly used by drug dependent persons in Southern Germany, especially Bavaria. In this context, notable figures for drug-induced deaths have even been reported in connection with fentanyl.

The counselling and treatment system in Germany – in the context of illicit drugs – offers a comprehensive range of counselling, treatment, harm reduction (syringe exchange, consumption rooms in some German *Laender*) and social services (sanitary and accommodation services). Overall, the available indicators suggest an aging population of opioid users. The number of first-time requests for counselling / treatment, the number of users coming to the attention of law enforcement for the first time and the number of violations of the German Narcotic Drugs Act (Betäubungsmittel Gesetz, BtMG) due to the use of heroin and other opioids have been declining for years. In contrast to that, there have been repeated reports of locally reemerging scenes (discussions surround the fact in some cases refugees are involved), and even in 2016 there was a renewed increase in the numbers of drug-induced deaths (see on this point the Harms and Harm Reduction workbook). A considerable problem associated with the injecting use of opioids is in the prevalence of communicable diseases amongst affected persons (on this point, see also the Harms and Harm Reduction workbook). Only a small amount of data is available regarding the abuse of medicines containing opioids.

1.1.2 Estimates of opioid use in the general population

Calculations based on two multipliers (drug-induced deaths, treatment) lead to an estimated figure of high risk heroin users ranging between 51,000 and 160,000 persons (with the estimates of the year 2016² serving as the basis for the calculation). This corresponds to a rate of 0.9 to 3.0 persons per 1,000 population in the age group of 15 to 64-year-olds (see Table 9). A detailed description of the estimation method as based on the multipliers can be found in section E2, Methodology. It should be noted, by way of qualification, that the value below is a purely calculative value, since on the reference date of 1 July 2017 78,800 persons were registered in the BfArM national substitution register alone in connection with a substitution supported treatment.

² See Table 9, Footnote 2.

Table 9 Estimate of the prevalence of high risk opioid use from 2011 to 2017 (figures in 1000s, age group 15 to 64-year-olds)

Data Source	Reference Year							Prevalence
	2011	2012	2013	2014	2015	2016	2017	per 1,000
Treatment ¹⁾	171 - 203	153 - 182	143 - 169	147 - 174	138 - 164	134 - 160	²⁾	2.5 - 3.0
Police contacts	79 - 106	74 - 95	68 - 90	61 - 84	56 - 77	³⁾	³⁾	
Drug-related deaths	63 - 91	62 - 65	57 - 59	56 - 75	64 - 108	58 - 103	54 - 97	0.9 – 1.2

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) Extrapolation 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).

(DBDD, 2018; special calculation)

The estimate based on the "treatment demand" multiplier, rose between 2007 and 2011 before falling once more in 2012 and 2013. The slight increase from 2013 to 2014 is mainly 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. Another increase was observed for the first time in 2015 (2000: 7,914; 2014: 1,648; 2015: 1,888). However, 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 for the first time in 2017. The estimated values for the multiplier "drug-related deaths" increased significantly for the first time in 2015 before falling somewhat since then.

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 (c.f. 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 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

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

1.2 Patterns, treatment and problem / high risk use

1.2.1 Patterns of heroin / opioid use

In the current scene study of the Frankfurt MoSyD, it is evident that heroin (together with crack) remains by far the most commonly used drug in the street drug scene (Werse et al., 2017). Two thirds of respondents had used heroin in the previous 24 hours, and for crack it was 84 %. On average, the respondents had taken 3.7 different drugs in the previous 30 days and 2.6 different drugs in the previous 24 hours. The frequency of use has slightly increased for heroin in comparison to the previous year; for crack it has remained unchanged.

Data is available from the DSHS on further addiction related diagnoses among clients who began therapy in 2016 in relation to a primary problem on the basis of the use of opioids. According to that data, in outpatient counselling and treatment facilities as well as specialist walk-in clinics, roughly every fourth person with a primary opioid diagnosis was also diagnosed with a clinically relevant alcohol or cocaine related disorder (26.9 % and 23.7 % respectively), roughly a third (31.3 %) with a disorder on the basis of cannabis use and roughly every tenth person (10.2 %) with a disorder based on amphetamines. Although these figures relate to persons who are already in contact with specialist walk-in facilities, this data provides indications about the consumption habits of the clientele beyond the use of opioids. In an article, Soyka (2015) notes once more that approximately one third of substituting opioid dependent persons are also alcohol dependent. This has serious consequences, since the alcohol consumption worsens both the compliance and the outlook. In the view of the author, the adequate dosage of the substitution drug as well as psychosocial intervention are particularly important in treatment practice, while anti-craving medicinal drugs are contraindicated or not evidence based.

1.2.2 Treatment: heroin and other opioids

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

In the MoSyD scene study, around two thirds (67 %) of users reported intensive use of heroin – daily or nearly daily use (Werse et al., 2017). While this percentage has hardly changed since the previous survey, the proportion of respondents using only rarely increased slightly to 14 %. For heroin, those who take up to three consumption units per day represent the largest group. In contrast, the number of those who do not use heroin daily has fallen in comparison to 2014 levels. Every tenth user can be considered an excessive heroin user, with a level of use exceeding eight consumption units per day. Accordingly, the second highest value to date to date has been reached for this pattern of use; it was only higher in 2008, at 14 %. The proportion of respondents who use heroin more than three times per day is 43 % overall.

1.2.4 Synthetic opioids

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

1.2.5 Injecting and other routes of administration

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

For the open drug scene in Frankfurt it was reported in the scope of the MoSyD scene study that in the case of heroin, there has been, over the years of the surveys, a falling trend in injecting use (Werse et al., 2017). In the most recent survey, the lowest value of all surveys by far for current users who predominantly or exclusively inject was reached, at 52 %. The sharp decline which has been observed since 2012 has thus continued. At the same time, the proportion of nasal use has increased (from 18 % to 31 %), as has smoking (9 % to 11 %). The proportion of those who inject and use nasally or inhalatively in roughly equal amounts, has fallen in comparison to 2014, from 15 % to 4 %. It can be assumed that in previous years many users have switched from exclusively injecting use to exclusively inhalative or nasal use. 2014 could have been a "transitional year" in which a higher proportion of respondents still practiced several types of use.

According to the data from outpatient counselling / treatment facilities, around one third (31.0 %) of people who started therapy due to primary problems caused by the use of opioids in 2016 reported "never" having used intravenously. Just under a half (44.9 %) reported "ever [having used] intravenously" "but not in the last 30 days" and approximately one in every four of those clients (24.1 %) reported recent (within the last 30 days) injecting

use. Based on the information provided by all those who started a new therapy in 2016 in outpatient addiction counselling facilities and specialist walk-in clinics, from whom corresponding information is available and who used heroin (for example also as an additional substance alongside another primary problem), in over half of the cases the heroin is injected (58.1 %), in just under one third of cases it is smoked or inhaled (30.5 %) with roughly every tenth person reporting having snorted heroin (10.0 %).

1.2.6 Infectious diseases

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

2 TRENDS

Not applicable for this workbook.

3 NEW DEVELOPMENTS

3.1 New developments in the use of heroin and other opioids

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

4 ADDITIONAL INFORMATION

4.1 Additional sources of information

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

No further information on further aspects of the use of heroin and opioids is currently available.

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

1.1.1 Use of NPS: Prevalence and Trends in NPS use

Use of NPS in the general population

As shown in Table 10, in the adult general population in Germany, 2.8 % of those aged between 18 and 64 have already had experience with NPS at least once in their lives (Gomes de Matos et al., 2016b). 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 10 Prevalence of use of NPS in Germany

	Source ¹⁾	Age	Total Prevalence	Male Prevalence	Female Prevalence
Lifetime	ESA 2015	18 - 64	2.8 %	3.1 %	2.5 %
	DAS 2015	12 - 17	0.1 %	0.2 %	0.0 %
12-month	ESA 2015	18 - 64	0.9 %	0.9 %	0.9 %
	DAS 2015	12 - 17	0.0 %	0.0 %	0.0 %
30-day	ESA 2015	18 - 64	0.0 %	0.0 %	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., 2016a). 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 use of NPS 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 current MoSyD pupil survey in Frankfurt, 6 % of 15 to 18-year-olds surveyed reported, as in previous years, having consumed a herbal smoke blend at least once in their lives. 1 % reported also having done so in the preceding 30 days (Kamphausen et al., 2018). 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), 3 % of respondents reported having tried a preparation of this nature on at least one occasion. 1 % of respondents also reported having taken other legal highs in the previous month. Compared to previous years, the prevalence of the use of herbal smoke blends and other legal highs is relatively stable at this relatively low level with small fluctuations. 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 per the definition.

The JEBUS study (Baumgärtner und Hiller, 2018) recorded NPS use 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 % for 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 Länder, Bavarian vocational schools show 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 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 (Piontek und Hannemann, 2017). In addition to visitors of electronic music events, clients of outpatient addiction support facilities and inmates in correctional institutions were questioned on their use.

Overall, a quarter of surveyed party goers reported having taken a new psychoactive substance before. The proportion of male respondents was higher than that of women. In the 12 months before the survey, 11.1 % of party goers had consumed NPS. The 30-day prevalence is 5.0 %. In response to the question of which new psychoactive substances were taken in the most recent instance of use, 49 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 2C-B, spice and herb mixtures as well as the substance 1p-LSD. The majority of respondents

reported consuming NPS for reasons of curiosity (49.1 %), followed by for reasons of the expected high (16.6 %) and the presumed legality of the substances (6.3 %).

In 2015 and 2016, data was collected on 249 persons from the participating outpatient addiction support facilities. Of the surveyed clients, 46 people reported the use of at least one new psychoactive substance. In total, the clients named 60 new psychoactive substances. The most frequently reported use was of spice (n = 20) and herb mixtures (n = 12). In total, 50 of the 60 substances named (83.3 %) can be categorised in the group synthetic cannabinoids. In addition, the use of cathinones was reported (n = 7). On the question of reasons for use, curiosity was the most frequently cited at 54.3 %. The proportion of respondents who reported using the substances due to lower detectability and due to good availability was 17.4 % in each case.

Of the correctional institutions which took part, data was collected on 86 people in the project period. A total of 41 people reported NPS use. Spice was named by far the most frequently (n = 26). Numerous others which were also named (e.g. Maya, herb mixtures, Bonzai, Jamaica) can be categorised as synthetic cannabinoids. In addition, the use of different cathinones (e.g. MDPV, Alpha-PHP, Alpha-PPP) was reported, though the number (n = 8) was considerably lower. At 53.7 %, curiosity was also the most frequently named reason for use in correctional institutions. A further 39.0 % reported using NPS on the basis of the associated high or the intensive effect.

1.1.2 Harms related to NPS use

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 (Piontek und Hannemann, 2017). Of the 46 people in outpatient addiction support facilities who reported having used NPS, 19 (41.2 %) 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.

In total, 34 persons in correction facilities reported having experienced unwanted side effects from NPS use. In relation to all people who reported this type of use, this corresponds to 82.9 %. The highest number of effects were named for synthetic cannabinoids (herb mixtures, spice). Stomach problems were frequently reported (nausea, vomiting), as well as cardiovascular complaints as well as impairments in cognition and perception.

Additional information on harms caused by NPS was collected in the Phar-Mon NPS project in cooperation with a poison information centre, (Giftinformationszentrale, GIZ) (Piontek und Hannemann, 2017). Poison information centres inform private individuals, hospitals and doctors about cases of poisoning. In the two project years, 49 mentions of new psychoactive substances were documented. With a total of 13, synthetic cannabinoids represents the largest group. In addition, 11 mentions were made of synthetic benzodiazepine and 4 each of synthetic opioids and cathinone. Additional information was analysed in relation to the 15 documented cases in which one single NPS was named as the triggering substance. In 14 of

these cases (93.3 %) the use that led to poisoning was attributed to abusive use behaviour. Suicidal intent was documented in one case. This was in relation to the substance flunitrazepam. The stated type of ingestion was overwhelmingly inhalative (n = 8, 53.5 %) or oral (n = 6, 40.0 %). In one case, relating to the substance 3-CMC, the use was nasal. The estimation of the degree of severity of the poisoning, by means of the so-called Poison Severity Score, was recorded as light in 8 cases (53.3 %), moderate in 6 cases (40.4 %) and in one case as not assessable.

1.1.3 Use of other drugs: Prevalence, trends and harms related to other drug use

In most pupil surveys representative of the population, 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 2015, the most commonly consumed medicinal drugs in the 30 days prior to the survey were painkillers (47.1 %), followed by sleep-inducing drugs and tranquilisers (5.2 %) and anti-depressants (4.9 %) (Gomes de Matos et al., 2016a). Indications of a clinically relevant medical drug use, according to the criteria of the Short Survey on Medical Drug Use (Kurzfragebogens zum Medikamentengebrauch, KFM), were exhibited by 6.0 % of female and 4.5 % of male respondents.

2 TRENDS

Not applicable for this workbook.

3 NEW DEVELOPMENTS

3.1 New developments in the use of NPS and other drugs

No information beyond that reported above is available.

4 ADDITIONAL INFORMATION

4.1 Additional sources of information

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 children and adolescents, who have to be treated on an inpatient basis as a result of an acute alcohol intoxication, and 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 particularly addressed in Bavaria, through the special 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

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 of use of other legal highs or research chemicals must still be viewed with extreme reservation (Werse et al., 2017a). The respondents in this study were supposed to report exactly which substances they had taken. In this context, only 7 of the 18 people who reported use experience with other legal highs, named a product or substance from the narrower group of legal highs / RCs ("bath salts" or specific RCs). The other people gave the names of illicit drugs, herbal smoke blends, alcohol or medicinal drugs, gave completely nonsensical answers or no answer at all. As such therefore, it can be assumed that far fewer respondents had tried synthetic new psychoactive substances aside from cannabinoids; the current use or experience of use is practically zero.

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-population 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 (Piontek und Kraus, 2016). 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) since 1990. The target group 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). 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 2015 was based on a two-stage, random selection process. Overall, the adjusted sample comprised 9,204 people, which corresponds to a net response rate of 52.2 % (Gomes de Matos et al., 2016a, Piontek et al., 2016b).

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 conducted representative surveys on cannabis use among 12 to 19-year-old adolescents and 12 to 25-year-olds in 2007, 2010, 2012 and 2014. The surveys from 2010 onwards were conducted in the scope of the Alcohol Survey. In the 2014 study, a representative sample of 7,000 adolescents and young adults was questioned (for

the first time also via mobile telephone). The response rate of the landline sample was 40.3 % and of the mobile telephone sample was 30.2 % (Orth und Töppich, 2015).

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 coordinated survey, initiated by the Pompidou Group at the Council of Europe and CAN (Swedish Council for Information on Alcohol and Other Drugs, Stockholm), uses Europe-wide common standards for data collection. Germany has participated in the ESPAD study since 2003 from a federal level. Bavaria took part in the follow-up surveys along with a number of other *Laender* in 2007 and 2011, however it was the only *Land* in which data was also collected in 2015. 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 classes, which corresponds to a response rate of 54.6 % following data cleansing (Kraus et al., 2016a).

SCHULBUS: A survey on the prevalence of contact with addictive substances was carried out for the sixth time in 2015, under the name "Hamburg SCHOOL BUS" (Hamburger SCHULBUS), within the framework of the "Local Monitoring System" (LMS) among pupils aged 14 to 18 at schools providing general or vocational education. Among illicit drugs, a key focus was on the different aspects of methamphetamine use. The survey was also carried out in parallel in the regions of Bavaria and Saxony that border the Czech Republic as well as the regions of North Rhine-Westphalia that border the Netherlands, due to growing indications that the prevalence of methamphetamine in these regions has sharply increased. For the 2015 survey, in total 4,226 14 to 17-year-olds were able to be included (weighted sample figures; unweighted sample $n = 7,297$). 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 experts and above all teachers (Baumgärtner und Hiller, 2016).

Monitoring System Drug Trends, MoSyD: A source that has been continuously providing information on drug trends at a local level for many years is the MoSyD from Frankfurt/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. A key methodological change in comparison to previous years is the fact that since 2013 the pupil survey has been conducted with the help of tablet PCs. In the recent 2016 MoSyD pupil survey, a total of 1,526 questionnaires were included in the analysis (based on all respondents from the 10th-12th grades or in the 1st-3rd years of a traineeship); 1,074 respondents were between 15 and 18 years old (Werse et al., 2017a).

Lower Saxony Survey The aim of the Lower Saxony Survey is to reach around 10,000 9th grade adolescents in each survey year, in order to carry out an analysis of the dark area of juvenile delinquency (Bergmann et al., 2017). The focus of the survey is therefore 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 study is conducted in Lower Saxony every two to three years, on an ongoing basis. The first survey was in 2013, the second in 2015. In the 2015 survey wave, 10,638 9th grade pupils were surveyed by means of a written questionnaire. The response rate was 68.5 %. The 9th grade was chosen for two reasons. The first is that delinquent or deviant behaviour occurs frequently in this age group. The other is that a representative study can be carried out quite economically for this age group, because almost all adolescents that belong to this cohort still attend general education.

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 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. 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 scope of cooperation with party projects took place via the respective prevention projects. A user questionnaire was laid out at the project stands and filled out by visitors. In 2016, a total of 804 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, 249 clients who came to the counselling centres due to NPS use, were surveyed in 2015 and 2016 as to their use behaviour in a face to face conversation. Information on NPS use in correctional institutions was collected in cooperation with the institutions which carried out external addiction counselling in the respective facilities. In the scope of this counselling service, 86 inmates were questioned on their use behaviour using structured guidelines. The GIZs are the central contact partners for different types of poisoning. Both affected individuals and hospitals or doctors who have attended to patients with corresponding symptoms, deliver information to the facilities 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 = 49 mentions).

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 existed at the time the interviews were conducted, from the beginning of June to the end of July 2016 (Werse et al., 2017). 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 referred to, 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 2016, the MoSyD scene study was carried out for the second time using an electronic questionnaire loaded onto tablet computers. As with the previous surveys, a total of 150 interviews were conducted. 104 respondents were recruited outside the low-threshold drug support facilities, i.e. directly on the street / drug scene, 46 respondents were approached in the contact areas of consumption rooms.

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 can 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 more 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 whilst also providing other, more interpretable, prevalence values. The 30-day prevalence 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) 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 person 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 so that 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. In several German studies, the SDS (SDS; Gossop et al., 1995) based on the last 12 months' use (e.g. ESA, SCHULBUS) is employed in order to obtain indications of clinically relevant patterns of use.

A detailed representation of the methodology for measuring and estimating high risk consumption 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)

For the reporting year 2017, two multiplier methods were recalculated for which results were also available from the previous year:

- Estimate on the basis of drug-related deaths

The total number of users of opioids 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).

- Estimate based on admissions to treatment

For this, the overall number of treated cases is first calculated on the basis of 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. The multiplier comes from publications with estimates of problem use of illegal substances and the help-seeking behaviour in the overall population and from comparisons of availability of treatment possibilities in a region. Since some of the data that is needed for this estimation process (diagnostic data of patients in hospitals) is generally made available only 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 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), 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 respectively 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 have only 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. 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

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