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EUROPEAN WEB SURVEY ON DRUGS:

NATIONAL IMPLEMENTATION AMONG A TARGETED SAMPLE OF RECREATIONAL DRUG USERS IN LUXEMBOURG

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BACKGROUND

Illicit drug use is a phenomenon that is common to most European societies. Yet, knowledge on drug use for recreational purposes remains to be scarce. The European Web Survey on Drugs (EWSD) is a pilot project coordinated by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) aiming to capture recreational users' consumption habits, attitudes and perceptions towards drug use, as well as to improve knowledge on drug markets at the European level. Luxembourg participated in the pilot project during the summer 2018 with the purposes of filling the gap of knowledge of recreational user habits and patterns of use, and improving the insight on the drug markets at the national level.

WHY USE WEB-BASED SURVEYS?

Web-based surveys are increasingly being used as a method to target and survey individuals on their health behaviour, typically young adults and adolescents due to their wide use of the internet. Compared to traditional survey methods, web-based surveys represent a cost-effective and timely manner of recruiting study participants allowing for:

- Wide online distribution and access to hidden populations;
- Higher degree of disclosure on sensitive and taboo topics;
- Cheap and quick data collection;
- Enhanced perceived security and anonymity.

Due to the positive features of web-based surveys, the EWSD was developed by the EMCDDA in order to allow National Focal Points targeted data collection on the sensitive topic of drug use as a valuable adjunct to other national health surveys that often fail to cover this topic sufficiently.

WHAT DO WE WANT TO KNOW?

- What are the characteristics of a targeted study sample of recreational drug users in Luxembourg?
- What are recreational drug users' habits and patterns of use in Luxembourg?
- What is the proportion of single and multiple drug users among the targeted study sample?
- Which types of drugs are mostly used? Is the use of one drug correlated with the use of other drugs?
- What are the attitudes and risk perceptions of the study sample towards drug use?

METHOD

The survey was originally accessible through the online platform Limesurvey® and available in English as developed by the EMCDDA. For the purpose of the national implementation of the EWSD, the survey was also translated into German and French and pilot tested in all three languages leading to minor textual and technical adaptations. The survey assessed use of

different types of drugs, consumption and purchasing habits, risk perceptions and attitudes towards drug use, and a few socio-demographic variables. It was launched and online accessible in all three languages (English, German and French) whereas data was collected during the months of August and September 2018. Participation was anonymous and voluntary.

Image and QR code used for the promotional campaign of the Luxembourg implementation of the EWSD

PROMOTION AND SAMPLING STRATEGY

The national launch of the EWSD was supported by the Ministry and Directorate of Health and involved partnerships with national drug treatment institutions and the PIPAPO project. PIPAPO collaborates with organizers of music events to promote a responsible behaviour around the event. The promotion and recruitment of participants for the EWSD was done in collaboration with PIPAPO, educational institutions (University of Luxembourg, schools), youth houses, and various cultural and nightlife settings in the capital city of Luxembourg. The following promotion and recruitment approaches were used:

- Online promotion through Facebook®, but also through Google Display® and YouTube® for a time period of two weeks;
- Distribution of promotional print posters and flyers;
- Presence in nightlife events where people were approached actively to complete the survey.

PARTICIPANTS AND DATA ANALYSIS

- In total, 3934 people attempted the survey. Participants were excluded from the statistical data analysis in case they did not meet the survey eligibility criteria, i.e. were a non-resident of the Grand-Duchy of Luxembourg, were below the age of 18, and/or did not use any type of illicit psychoactive drug during the past year.
- Participants who did not fully complete the survey were also excluded from further analysis.
- For the statistical data analysis, 1223 valid respondents were included. Due to missing values on some variables, the N (number of valid respondents) varies for the different types of analyses performed.
- Data were analysed using SPSS version 25 using descriptive statistics with a level of significance set at $p < 0.05$.

RESULTS

Socio-demographic characteristics of the sample (N=1223)

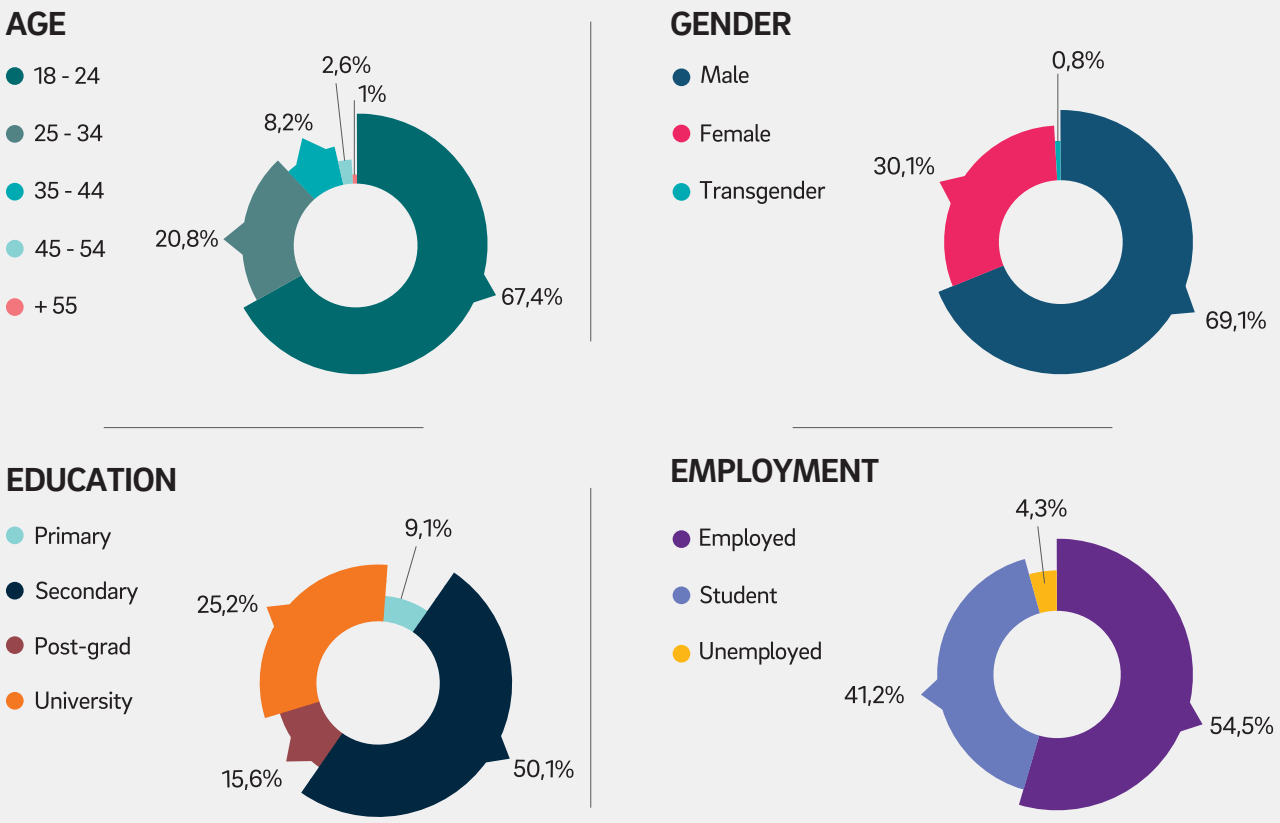


FIGURE 1. Socio-demographic characteristics of the targeted study sample (valid %)

According to the results of the descriptive data analysis, the majority of the survey participants are young adults between the age of 18 and 24 years, followed by those aged 25-34 years-old.

Moreover, more than two-thirds of the survey participants are male and the majority reported having accomplished secondary or higher education. Nearly all the respondents indicated to be currently studying or working.

USE OF MULTIPLE DRUGS

The use of multiple drugs was considered as the proportion of respondents who reported using at least two illicit drugs and/or NPS during the last year.

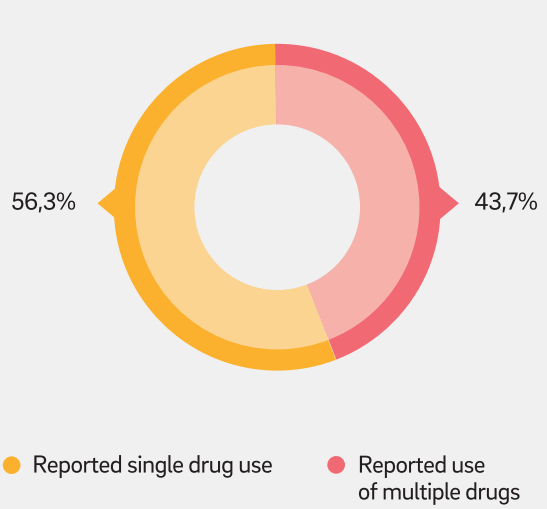


FIGURE 2. Proportion of users of multiple drugs among the total sample (valid %)

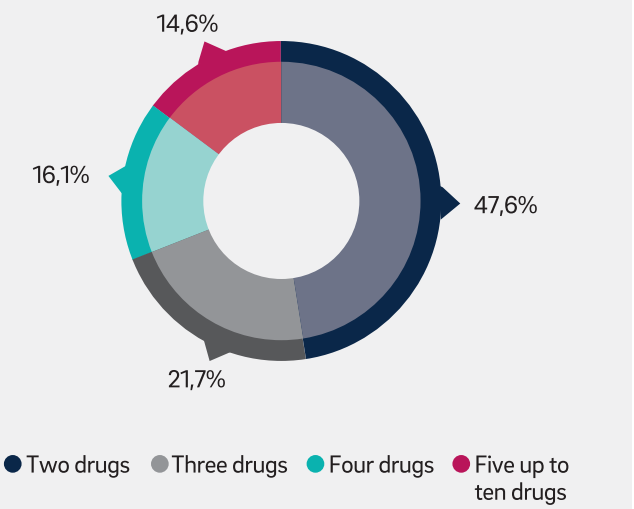


FIGURE 3. Distribution of users of multiple drugs according to the number of substances used (valid %)

Results reveal that single drug use is predominant. Use of multiple drugs is nevertheless very frequent and reported by more than 40% of the respondents.

Among those respondents that report multiple drug use, almost half report using two drugs, whereas about 15% report using five up to ten drugs.

PREVALENCE RATES OF LAST YEAR AND LAST MONTH DRUG USE

Alcohol is the substance with the highest prevalence rate in terms of current use, exceeding all illicit substances. Prevalence rates of drug use among the targeted sample reveal that cannabis is the illegal drug most commonly used both recently and currently, followed by cocaine and MDMA. Substances such as amphetamines, synthetic cannabinoids and other hallucinogens (e.g. mushrooms) are also commonly used by recreational drug users. The use of other NPS among the targeted sample is not negligible: while 4,7% used other NPS last year, there is a small proportion of users that report having used synthetic opioids and/or synthetic cathinones.

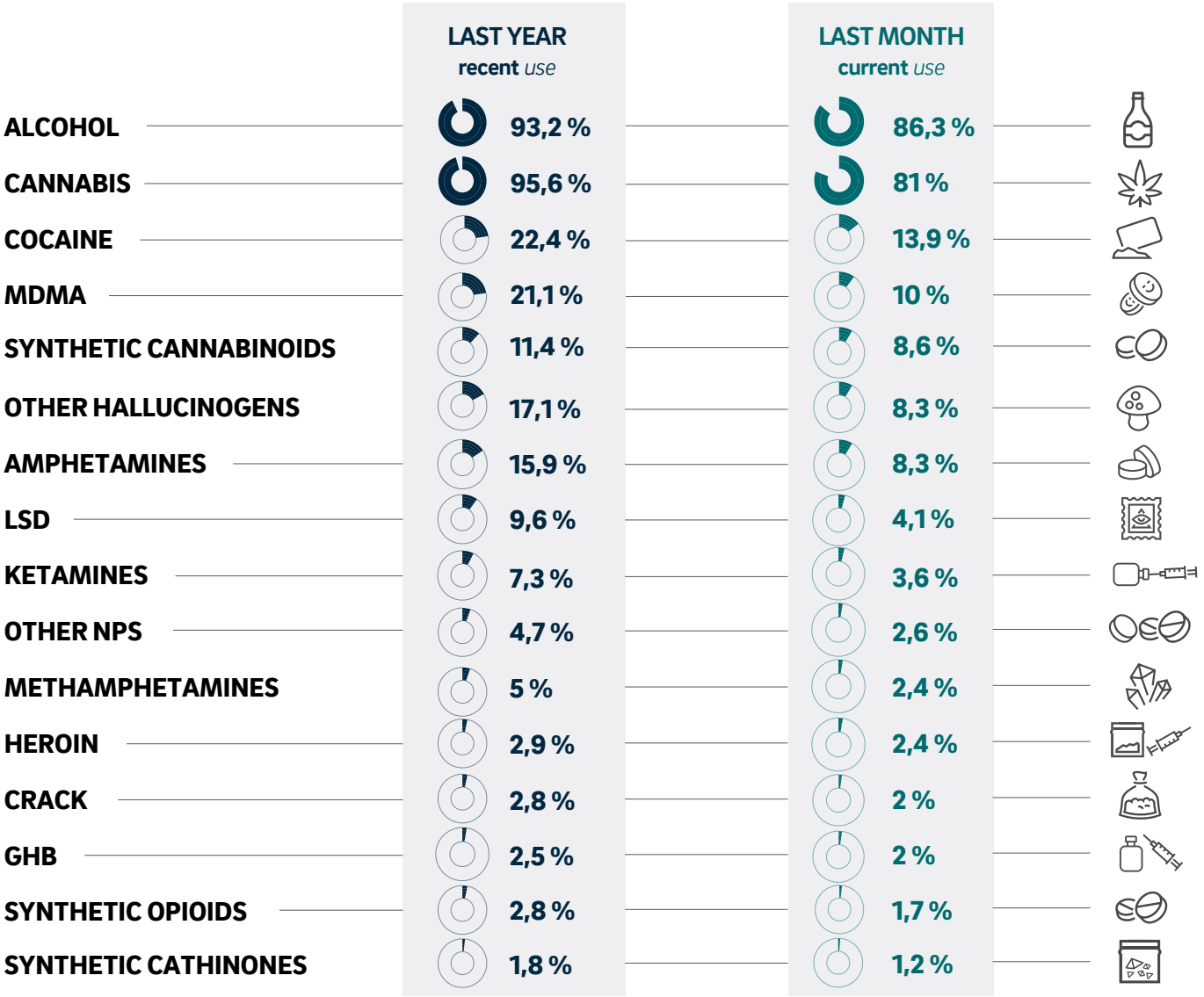


FIGURE 4. Recent (last year) and current (last month) prevalence rates of single drug use (%)

CONSUMPTION PATTERNS AMONG MALE VS FEMALE RESPONDENTS

Recent and current consumption patterns of use of illicit drugs were compared between male and female respondents (results are not depicted in a figure or table).

Male and female respondents do not differ in their *recent* consumption of illicit drugs.

With regard to *current* consumption of illicit drugs, women present a higher consumption synthetic cannabinoids (χ^2 (1) = 4.47, p <.05) than men, while current use of cocaine (χ^2 (1) = 5.92, p <.05) and cannabis (χ^2 (1) = 4.95, p <.05) is significantly more common among men than among women.

No other statistically significant differences with regard to current consumption were found between men and women.

CONSUMPTION HABITS AND DRUG MARKET

TABLE 1. Consumption habits and drug market

	CANNABIS (RESIN)	CANNABIS (WEED)	COCAINE POWDER	AMPHETAMINE	MDMA	NPS HERBAL
Average number of days of use – last month	12 DAYS / MONTH	16 DAYS / MONTH	5 DAYS / MONTH	6 DAYS / MONTH	4 DAYS / MONTH	14 DAYS / MONTH
Amount (grams or units) used on a typical day	2.85 JOINTS	2.44 JOINTS	1.18 GR	0.8 GR	0.51 GR	1.75 GR
Amount bought on a typical purchase (grams/units)	4.06 GR	4.56 GR	2.45 GR	8.75 TABLETS	4.61 TABLETS	16.69 GR
Average price (€ euro) per gram or tablet	14,5 € / GR	16,7 € / GR	64,9 € / GR	7,3 € / TABLET	8,7 € / TABLET	10,7 € / GR
% of drug typically shared with others	49,3 %	43,7 %	43,4 %	44,8 %	47,8 %	-
How respondents get their drugs (several answer options possible)	Brought from dealer 74,2 % Obtained for free 43,6%	Brought from dealer 62,3 % Obtained for free 47,1 %	Brought from dealer 48,7 % Obtained for free 42,9 %	Brought from dealer 38,9 % Obtained for free 54,4 %	Brought from dealer 42,2 % Obtained for free 46,9 %	Brought from dealer 40,9 % Obtained from a friend (given or brought) 40,9 %

Among the targeted sample, cannabis weed (marijuana) is more frequently used than cannabis resin. Cannabis weed is used on average 16 days a month.

Respondents report smoking 2-3 joints of cannabis (weed and resin) on average on a typical day.

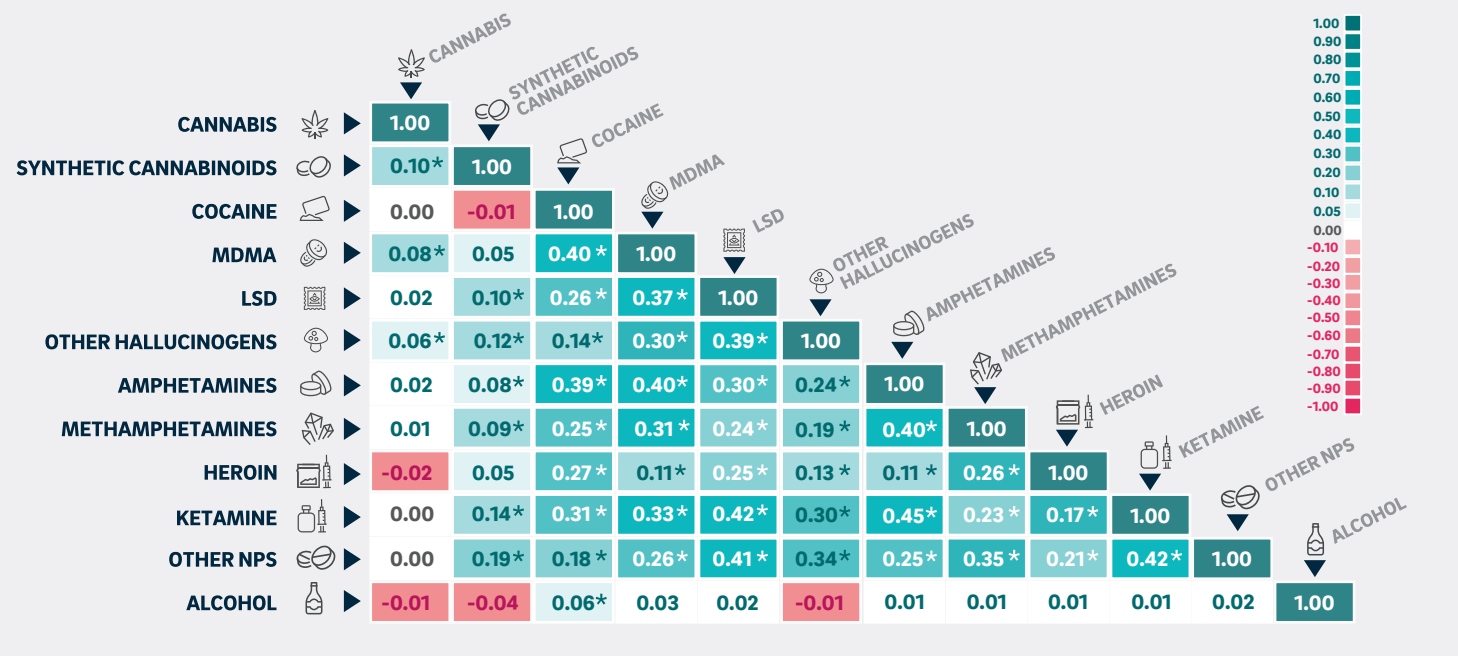
Usually 4 up to 4.6 grams of cannabis (weed and resin) are bought on a typical purchase, whereas about 2.5 grams of cocaine and almost 9 tablets of amphetamines are bought.

Cocaine is the most expensive drug and amphetamine the cheapest.

Regardless of the substance, recreational drug users tend to share almost half of the amount of drugs they buy.

Drugs are obtained predominantly through a dealer (i.e. bought on the illicit market) or for free. Other means of supply (such as a shop online, the internet encrypted markets, etc.) do not appear to be relevant for the purpose of recreational drug use in Luxembourg.

ASSOCIATIONS BETWEEN CURRENT USE OF DIFFERENT TYPES OF DRUGS



	CANNABIS	SYNTHETIC CANNABINOIDS	COCAINE	MDMA	LSD	OTHER HALLUCINOGENS	AMPHETAMINES	METHAMPHETAMINES	HEROIN	KETAMINE	OTHER NPS	ALCOHOL
CANNABIS	1.00											
SYNTHETIC CANNABINOIDS	0.10*	1.00										
COCAINE	0.00	-0.01	1.00									
MDMA	0.08*	0.05	0.40*	1.00								
LSD	0.02	0.10*	0.26*	0.37*	1.00							
OTHER HALLUCINOGENS	0.06*	0.12*	0.14*	0.30*	0.39*	1.00						
AMPHETAMINES	0.02	0.08*	0.39*	0.40*	0.30*	0.24*	1.00					
METHAMPHETAMINES	0.01	0.09*	0.25*	0.31*	0.24*	0.19*	0.40*	1.00				
HEROIN	-0.02	0.05	0.27*	0.11*	0.25*	0.13*	0.11*	0.26*	1.00			
KETAMINE	0.00	0.14*	0.31*	0.33*	0.42*	0.30*	0.45*	0.23*	0.17*	1.00		
OTHER NPS	0.00	0.19*	0.18*	0.26*	0.41*	0.34*	0.25*	0.35*	0.21*	0.42*	1.00	
ALCOHOL	-0.01	-0.04	0.06*	0.03	0.02	-0.01	0.01	0.01	0.01	0.01	0.02	1.00

FIGURE 5. Pearson correlations between last month prevalence use of several illicit drugs

NOTE: The associations between the use of different types of drugs were computed using Pearson correlations. Pearson correlations range between 1 (the strongest positive association) and -1 (the strongest negative association). Substances with low prevalence rates were excluded from the correlation analysis. * p <0.05, indicates statistical significance.

Cannabis use is not associated with the use of other drugs (except with synthetic cannabinoids revealing a weak positive association). Similarly, alcohol use is independent from the use of any other type of illicit drug.

The use of all other illicit drugs are positively associated among each other - using one drug increases the likelihood of using another drug.

Cocaine use is particularly associated with the use of MDMA, amphetamines and ketamine.

MDMA use is particularly associated with the use of amphetamines and LSD.

ATTITUDES AND RISK PERCEPTION TOWARDS ILLICIT DRUGS USE

The EWSD inquired about attitudes towards permission of cannabis use. Respondents were invited to indicate to what extent they agree with the statement "people should be permitted to take cannabis (hashish or marijuana/weed)". Moreover, respondents' risk perception was assessed by the question "how much do you think people risk harming themselves (physically or in other ways), if they:

1. try cocaine or crack once or twice;
2. smoke marijuana or hashish regularly;
3. have five or more drinks each weekend".

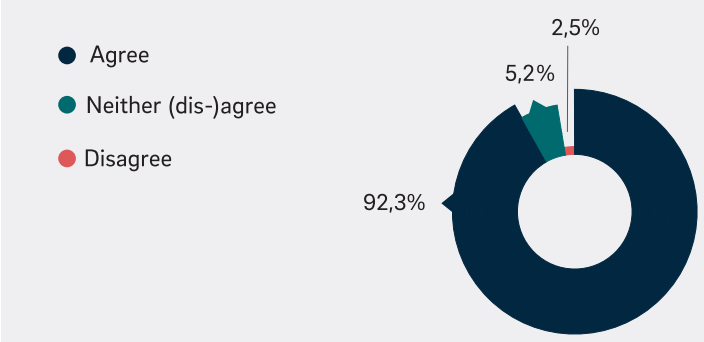


FIGURE 6. Attitudes towards permission of cannabis use

The great majority of the respondents consider that "people should be permitted to take cannabis (hashish or marijuana/ weed)".

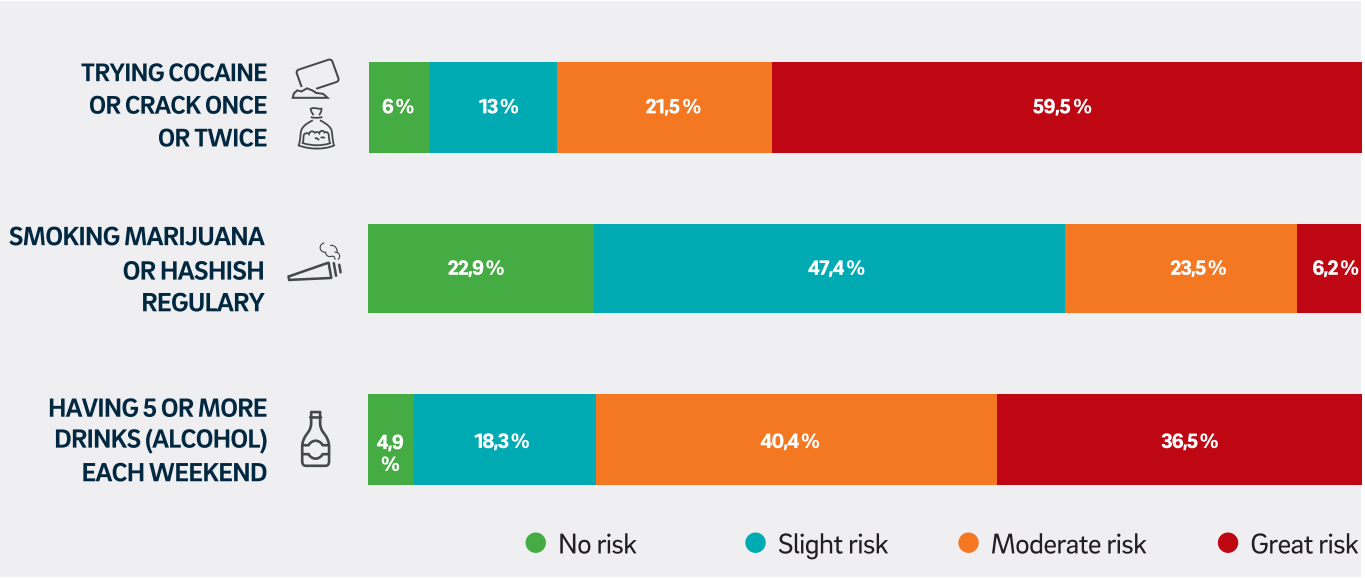


FIGURE 7. Risk perception associated with the use of cocaine, cannabis and alcohol

The EWSD survey results reveal that respondents perceive an overall greater risk by trying cocaine or drinking 5 or more alcoholic drinks as by smoking marijuana or hashish on a regular basis:

"Smoking marijuana or hashish regularly" is perceived as being less dangerous than "trying cocaine or crack once or twice" or "having 5 or more drinks each weekend".

The majority of the respondents consider that "smoking marijuana or hashish regularly" has no or a slight risk.

There are more users considering the use of cocaine and the use of alcohol as moderately or greatly risky behaviors than users considering these behaviors as slightly or not risky at all.

DISCUSSION

METHODOLOGY

The EWSD is the first large scale survey targeting a specific sample of recreational drug users in Luxembourg with detailed information on topics such as user patterns, amounts used, frequency of use and supply.

- The EWSD allows exploring new variables such as attitudes and risk perceptions, and therefore is a relevant complement to general population surveys.
- The large number of responses reveals that a web-based survey promoted mainly through social media is efficient to target hard-to-reach populations.
- The EWSD allows for a short data collection time with low delivery cost.

RECREATIONAL DRUG USERS' CHARACTERISTICS AND PATTERNS/HABITS OF USE

- Recreational drug users tend to be favourable to the permission of cannabis use. The use of this drug is considered less risky than the use of cocaine and alcohol.
- Data from the EWSD suggests that cannabis or alcohol use are not associated with the use of other types of drugs. Use of other types of illicit drugs such as cocaine increases the likelihood of using other types of hard drugs.
- The fact that cannabis and cocaine reveal the highest last year and last month prevalence rates suggests a high presence of these drugs on the Luxembourg market.
- The majority of the drugs obtained are shared with others – calling attention to the social component of drug use. This suggests that drugs are mostly used for social purposes and in social contexts.

DRUG MARKET

- On a recreational level, cannabis is the most frequently used substance (in terms of days of use) followed by herbal NPS.
- The observed prevalence of NPS use suggests that these substances may have a higher presence on the Luxembourg market than expected.
- Recreational drug users in Luxembourg tend to obtain their drugs through a dealer or for free.

MAIN LIMITATIONS

- The online-promoted web-survey implied a lack of control over the selection process.
- An important number of respondents had to be excluded from the survey analysis since they did not comply with the inclusion criteria, i.e. did not use drugs in the last year and had no residency in Luxembourg. However, one common characteristic of Luxembourg is its large cross-border working population.
- Although relatively few participants reported recent and current use of synthetic cannabinoids, herbal NPS were used on average about 14 days per month. It is unknown if study participants knew what synthetic cannabinoids and NPS are, inducing the risk that they confused them with natural (CBD) cannabis products.
- The study was conducted in a targeted non-representative sample. One needs to be cautious in the interpretation of the results since they cannot be generalized to the general population of drug users and neither to other recreational drug user populations.

ACKNOWLEDGEMENT

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CONFLICT OF INTEREST

No conflict of interest has been declared by the authors.

LIST OF ABBREVIATIONS OF PSYCHOACTIVE DRUGS

- **MDMA**: 3,4-Methylenedioxymethamphetamine (also known as "Ecstasy")
- **NPS**: New psychoactive substance(s)
- **LSD**: Lysergic acid diethylamide
- **GHB**: Gamma hydroxybutyrate

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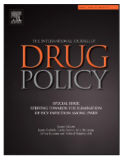

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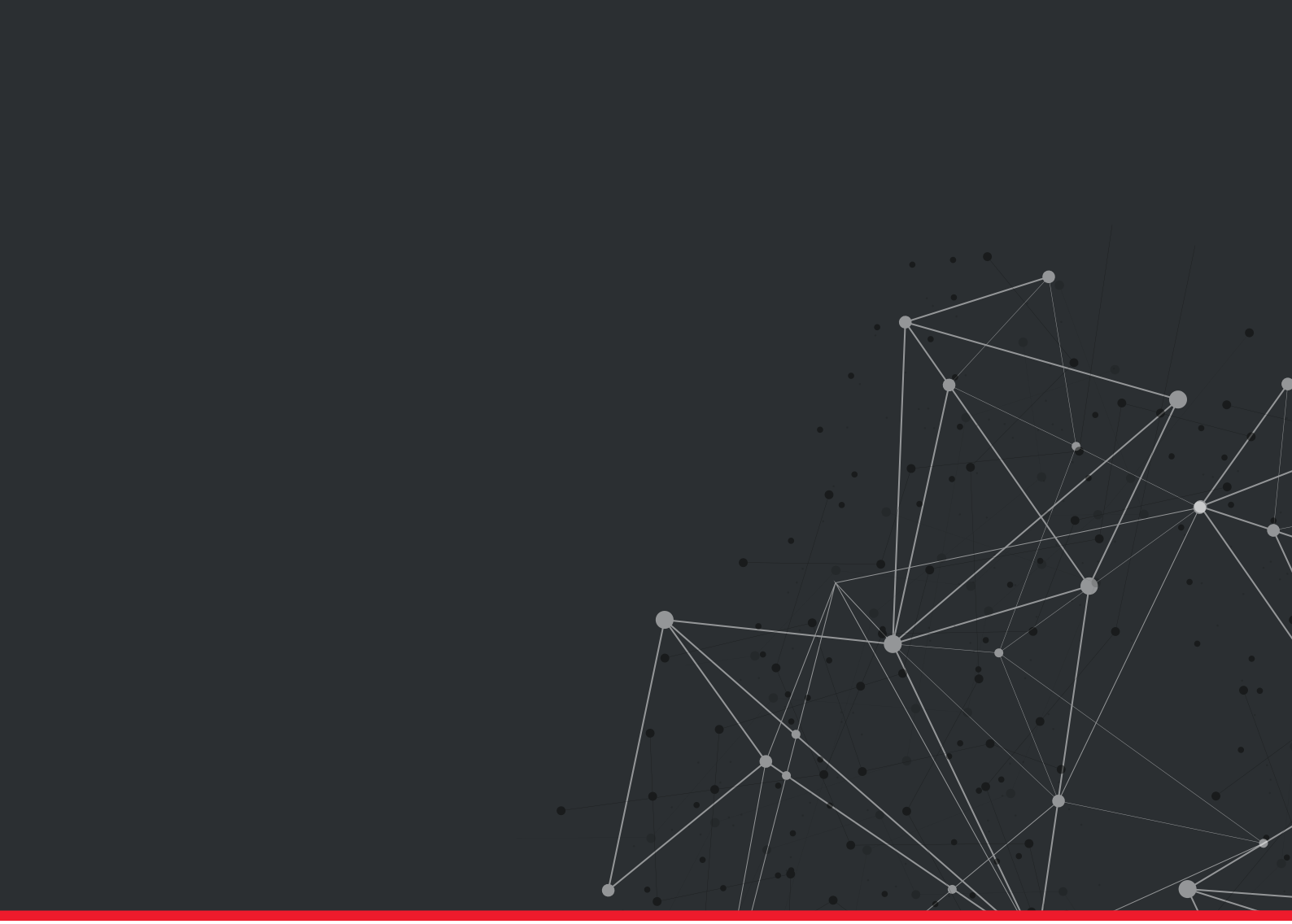

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