

# New psychoactive substances: user profiles and practices

Agnès  
Cadet-Tairou

Since the gradual emergence of NPS (new psychoactive substances) in France at the end of the '00s, the analysis of this phenomenon has mainly focused on supply, the innovative mechanisms of which have given the drugs market new complexity, and are causing the most conventional anti-trafficking measures to fail [1]. The information on users is still therefore fragmented. From a quantitative perspective, the initial accurate data, measured among adults in 2014, concern synthetic cannabinoids only, and estimate the proportion of lifetime users of these substances at 1.7% among 18-64 year-olds and up to 4.0% among 18-34 year-olds [2]. Qualitative findings mainly derived from the TREND and SINTES<sup>1</sup> schemes, user forum monitoring carried out at the OFDT [1, 3] in the context of the I-TREND (Internet Tools for Research in Europe on New Drugs) project, and findings shared by institutions<sup>2</sup>, notably on serious adverse effects, have enabled the various NPS user populations to be defined more clearly. However, user practices, profiles and opinions remain unclear. NPS diffusion methods, mainly via the Internet and by post, result in dispersed, discreet use, giving users less visibility. This so-called "hidden" population, i.e. having no contact with harm reduction or health care systems, or with the law enforcement services, can be quantified, but its practices have proven too specific to be described in the context of a general population

Results of the French section of the online survey conducted in 2014 as part of the European I-TREND project



survey. Now, public prevention measures require both precise knowledge of all populations concerned, but, above all, concrete and corroborating, qualitative or quantitative information, to support the decision-making process. An online survey among users of these substances was therefore conducted in France, the Netherlands, Poland and the Czech Republic in 2014, in the context of the I-TREND<sup>3</sup> project, jointly funded

1. TREND: Emerging Trends and New Drugs; SINTES: National detection system of drugs and toxic substances.

2. Toxicovigilance from the ANSM (French National Agency for Medicines and Health Products Safety) and CEIP (French Network of the Regional Abuse and Dependence Monitoring Centres), information from customs and police scientific and intelligence departments.

3. Coordinated by France, it brought together 4 other European countries (the Netherlands, Poland, the Czech Republic and the United Kingdom, which did not take part in the survey as national data were already available). Among other things, it enabled a user-forum-based monitoring system to be designed and implemented, together with an instrument for monitoring and analysing online supply (<http://www.ofdt.fr/europe-et-international/projets-internationaux/i-trend/>).

## NPS: what are they?

The international acronym "NPS" (New Psychoactive Substances) refers to a regulatory definition. Any psychoactive substance used as a "drug" and not scheduled in the international conventions of the United Nations from 1961 and 1971 is considered a NPS. This extensive definition, which is subject to changes, currently includes both plants and substances which have nonetheless long been misused but which are not yet governed by these texts. It does not fully cover the actual boundaries of the phenomenon relating to "RC" (Research Chemicals), the name usually favoured by users, particularly in the recreational setting.

This is why the OFDT tends to describe them as "new synthetic products" [*nouveaux produits de synthèse*] (which also corresponds to the acronym NPS in French), as this terminology takes their characteristics into account more effectively. These are synthetic substances, which can be modified infinitely, and are hence potentially innumerable. They offer numerous variations on the effects of "established" drugs, of which they are often presented as imitations on local markets (sales, gifts, exchanges). They may also be sold abusively under the name of the imitated substance (MDMA, LSD, etc.), leading some individuals to use NPS unknowingly. Referred to by their chemical name by certain users, they are also sold under invented brand names to less-informed users. Lastly, they also share the same characteristics of arriving on the national market by post (or by private means) after being ordered online, which represents the main means of diffusion [5].

by the European Commission. It aimed to gain greater insight into the profiles, motivations and practices of individuals having tried or using these substances [4].

Following a short methodological presentation, this text will go over the descriptive aspects concerning the survey respondents, then, focusing on individuals having used a NPS in the last 12 months<sup>4</sup>, it will examine the contexts and reasons for use on the most recent occasion, together with practices in terms of use. It will then examine the channels used to purchase the products, notably online purchases, issues relating to information on NPS, ending with a brief insight into the opinion of the respondents on the properties and dangers of NPS compared to established drugs.

### ■ Basic aspects of the method

This online survey does not include sampling. While this type of survey does not allow for any extrapolation of quantitative results to groups larger than the respondent population, and cannot be used to estimate the proportion of users in the general population, it nonetheless, at a moderate cost, specifically addresses dispersed populations with limited visibility and for which little information was previously available. A decisive step in this survey therefore involves implementing a communication strategy capable of reaching the largest possible target populations to encourage them to complete the questionnaire. Hence, several forums frequented by users of psychoactive substances agreed to share information

on the study, as well as French self-help associations, professionals working in the field of addiction care and harm reduction, directly and/or through different umbrella associations, and, lastly, the INPES (French National Institute for Prevention and Health Education) Drogues Info Service platform. In addition, the survey has been mentioned or even featured by some media channels in various articles on drugs. Lastly, the OFDT published a press release when it was launched, and repeatedly issued information on social media during the study.

Due to the international nature of the survey, a questionnaire was adapted to different local situations: contexts for the diffusion of NPS, populations most affected and names of products. The lack of a clear operational definition of NPS, shared by users (box, page 1), was a delicate issue. The questionnaire was drawn up then tested from April 2013 to April 2014. The survey was placed online in France from 19 May to 30 October 2014. The questionnaire was accessed via a home page explaining the concept of NPS. Overall, 1,355 individuals started the questionnaire, and 607 questionnaires were kept for analysis<sup>5</sup>.

A limitation of the survey stems from the difficulty in assessing the weight of biases related to recruitment via a non-random method. Hence, the lack of advertising via the major mainstream media, difficult to implement for a public monitoring centre, undoubtedly limited access to users among the general population liable to be familiar with illegal substances only through cannabis use and potentially interested in cannabis substitutes.

## ■ NPS users

### Respondents familiar with NPS to varying degrees

Based on the various responses, particularly those asking the participants to state substances or chemical classes, French respondents were divided into three groups:

■ **"Ascertained NPS users"** (59% of respondents, N=358), able to state or identify one or more names (or chemical categories) of substances used in the past year.

■ **"Probable or former NPS users"** (16%, N=100), unable to identify a substance used or not having used NPS in the past year, but having used a substance displaying the characteristics of a NPS (described as new on the market, purchased online, imitating the effects of another drug, etc.).

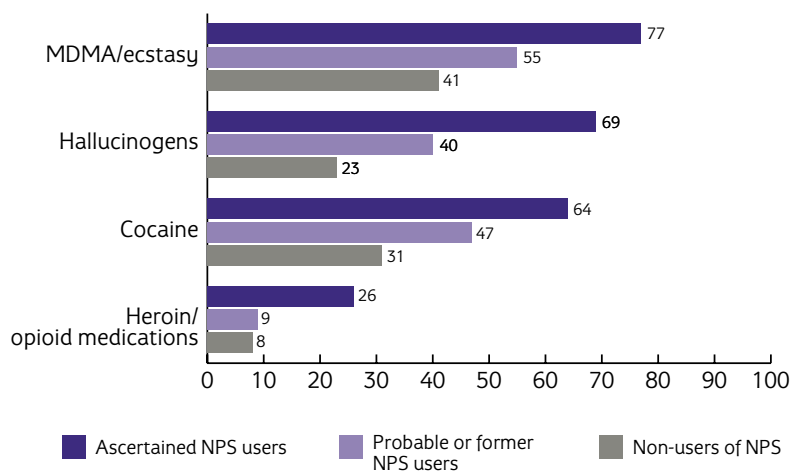
■ **"Non-users of NPS"** (24%, N = 140), not having stated any NPS used in the past year, but sometimes established substances (e.g. MDMA) and not having used any substances with at least one characteristic suggesting a NPS.

While, in fact, only the first group and part of the second group had access to these questions describing practices in terms of last year use in detail, the answers to the questions on information methods and certain opinions revealed a different stance among these groups with regard to NPS. In order to interpret these differences, the following assumptions were put forward: the last group included individuals who more than likely had never used NPS (or only by chance) and who were generally unfamiliar with drugs, or inquisitive individuals interested in the survey; the first two groups broadly correspond to two NPS user populations, the first very clearly familiar with these substances and their chemical names, and the second less familiar with the complex context of these multiple substances.

### Primarily drug users

The respondents who were NPS users are primarily "conventional" drug users. Only 3% of respondents claimed to have never tried illegal drugs or opioid substitution medications, none in the "Ascertained or probable NPS user" category. Only 3% of the latter claimed to have not used these substances in the past year. Prevalence in terms of last year use was high, not only for cannabis (84%), but also for stimulants, notably

Figure 1. Levels of "established" substance use in the last 12 months, among respondents (%)



Source: OFDT I-TREND Online Survey, 2014

4. The module of questions on these aspects was only open to individuals having used a NPS in the past year.

5. i.e. those having completed the first module of questions (40% of the questionnaire).

synthetic substances, strongly associated with the "electro" cultural sphere (MDMA/ecstasy and/or amphetamines, 65%), and hallucinogens, other than NPS (53%). Prevalence in terms of use is highest in the "Ascertained user" group, and lowest in the "Non-user" group (Figure 1).

### Usually young, qualified, urban males

Nearly half of the respondents are aged under 25, the mean age being 28. They seem relatively young (compared to drug users encountered at specialised treatment or harm reduction centres<sup>6</sup>) [6, 7] and are probably fairly close in age to users in the recreational setting<sup>7</sup> [8], which is consistent with the diffusion of NPS in these environments [1]. However, 3 out of 10 were aged over 30, and some were aged over 50, which confirms that NPS are not exclusively used by younger generations<sup>8</sup> in France [1]. According to the qualitative data collected, these older profiles include "psychonauts"<sup>9</sup>, precursors of this type of use or "former" drug users interested in these new substances. Women are still in the minority, and their proportion increases when the relationship with NPS appears weaker: 19% of "Ascertained users" are women; however, this proportion reaches 30% among "Probable or former users" and 41% among "Non-users" of NPS. Predominantly urban - 6 out of 10 live in towns with more than 500,000 inhabitants or less than a 30-minute journey away -, the respondents generally have a fairly high level of education. Among those under the age of 25, 8 out of 10 have the French Baccalauréat and half have received higher education after the French Baccalauréat for 2 years or more. Among those aged over 25, 9 out of 10 have the French Baccalauréat and 3 out of

10 have received higher education after the French Baccalauréat for at least 5 years. Their professional situation is highly dependent on age. Among those aged under 25 years, 63% are college (*lycée*) or university students, whereas 25% are already in work. Between the age of 25 and 34, only 1 out of 10 are currently studying, while the majority are in work (63%), but nearly 2 out of 10 individuals claim to be job-seekers<sup>10</sup>. Over the age of 34, three-quarters of respondents are in work, whereas less than 1 out of 10 claim to be unemployed, and the others claim not to be in active work or claim to be retired<sup>11</sup> (7%). Their housing conditions are very rarely precarious, with three-quarters of "Ascertained or probable NPS users" having their own accommodation, whereas 20% live at home with their parents. The level of income among these NPS users is mainly distributed according to their age group, and covers a wide range: 19% earn less than €400 a month (36% of under 25s) and 10% more than €2,500 (22% of those aged 35 and over).

### Contexts and reasons for use

Last use occurred in the company of friends for the majority of respondents (76%), with 20% of users having used the substance alone, mainly at home. Regardless of social circle, a large proportion of use (for 6 out of 10 users) took place at the user's or friends' home<sup>12</sup> (private context). Last use took place in a public context, either in a closed recreational setting (club, bar, party), or "outdoors" (countryside, etc.) in a context similar to the alternative recreational setting - free parties, etc.), for 2 out of 10 users in each case. Two main types of fairly conventional reasons for the non-medical use of psychotropic substances emerge from

the responses provided by users (Figure 2). The first type corresponds to the search for an experience, exploration, for which "psychonautics" represents the paradigm. "Change in perception", cited by 60%<sup>13</sup> of users as one of the most important anticipated effects at the last use, is the main reason stated. Users seeking "a change in perception" consider more frequently than others (56% vs. 42%\*\*) that simple curiosity is a "very important" criterion in choosing the last substance used. This curiosity seems moreover to be the key driving force for choosing the last substance according to all respondents, since 82% of them considered this to be "important" or "very important" (Figure 3). Curiosity is, moreover, described more frequently as "very important" for "outdoor" or private sessions (58%\* and 51% of respondents, respectively) than for those taking place in a conventional recreational setting (39%). 47% of respondents seek to "get stoned", this equivalently in all use settings. While this purpose appears moderately

6. 35 years in 2011 and 36 years in 2012, respectively.

7. Mean age 24 years in "electro" party scene in 2005.

8. The French are the oldest in the European survey, while the mean age of the Polish, Czech and Dutch respondents corresponds to 20, 24 and 26 years, respectively.

9. Psychonautics involves exploring modified states of consciousness in an almost scientific manner. Psychonaut users represent the "expert" core of NPS users, familiar with the chemical classifications and the many subtle differences between the effects of these substances.

10. The rate of unemployment among the 25-49 age group reached 9.3% in the third quarter of 2014 (INSEE, unemployment as per the ILO and job market indicators (employment survey results) - third quarter of 2014. Informations Rapides, 2014, 279: p. 2.

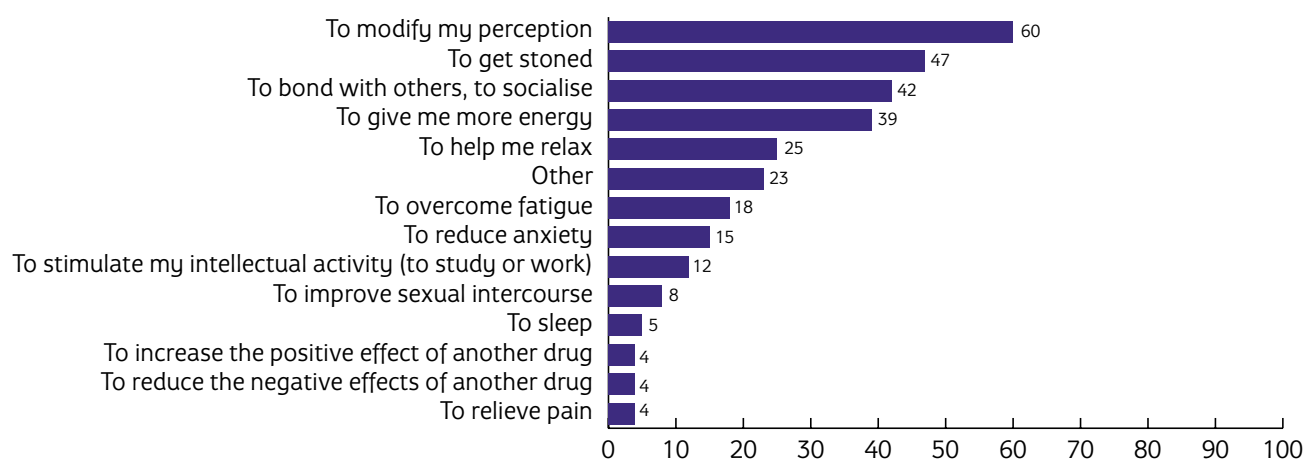
11. This might concern early retirement for certain occupations.

12. This situation is specific to French respondents; it concerns 4 out of 10 users in the other participating countries.

13. Multiple-choice question, number of answers limited to 5.

14. \* p<5%; \*\* p<1%. If nothing is specified, the difference is not statistically significant.

Figure 2. Main effects sought after by respondents at last NPS use (N = 370) (%)



Note: Multiple-choice question, number of answers limited to 5  
Source: OFDT I-TREND Online Survey, 2014

linked to the choice of a substance with "potent effects", it more frequently involves selecting a substance based purely on opportunity (method claimed by 48% of those seeking to get stoned vs. 34%\*\* of other respondents), especially for last use in a recreational setting. Lastly, another approach refers to social interaction and recreational moments. Although last use took place with friends for nearly 8 out of 10 users, "to bond with others, to socialise" ranks third among the most anticipated effects (41%). Expression of this expectation is often associated with the desire for energy ("to give me more energy"), and these two reasons (sociability and energy) are more apparent in the conventional recreational setting than in other contexts (56% vs. 38%\*\* and (65% vs. 32%\*\*). Users seeking sociability chose the substance they last used "out of opportunity" (81%) more often than the other users (67%\*\*). Moreover, the last substance used acquired as a gift (25%) reinforces the qualitative data reporting improvised use, particularly in a recreational context [9].

The other anticipated effects, suggested more sporadically, are functional in nature (to help me relax, to reduce my anxiety levels, etc.). These reasons are mainly claimed in a private use context. Stimulation of intellectual activity was particularly mentioned by respondents – more than likely psychonauts – taking care to clarify their response, stating expectations clearly related to hallucinogenic substances: creativity, introspection, comprehension of the world, etc. There were practically no claims with regard to modulating the effects of other drugs.

As regards the last substance used, those claiming to select the substance first highlight its positive properties (good quality, potent effects). The concern given to minimising risks is mainly shown by the choice of a sub-

stance which is "not too addictive", a motive which mainly concerns users seeking a "change in perception" (35% vs. 20%\*\* for other respondents), particularly concerning individuals for whom last NPS use took place in a private context. A combination of these three characteristics ("not too addictive", "change in perception", and "private context") fairly clearly describes the psychonaut's approach. However, the limited danger of the substance is rarely mentioned as a "very important" criterion, and seems to have played a secondary role in the choice of substance. The assumption which seems plausible, in view of the overall responses to the survey, is that the respondents are not indifferent to the danger of the substance but, on the contrary, believe that this danger exists regardless of the substance.

Lastly, the fact that the substance is not scheduled on the list of narcotics ("not illegal"), and its non-detection in existing urine or saliva tests are criteria which are fairly broadly deemed unimportant to the survey respondents (Figure 3) despite a few subtle differences depending on the context of use: the fact that the substance is not classified is more important for users in a private setting (1 out of 10 users even considered this "very important"), whereas non-detection in tests is mainly of interest to users in an outdoor setting, a tenth of whom describe this criterion as "very important".

■ **Patterns of use**

**Highly variable frequencies of use reported**

Among the respondents, 62% mention last year NPS use and 33% last month use. These levels rise to 95% and 53%, respectively, among those considered "Ascertained NPS users".

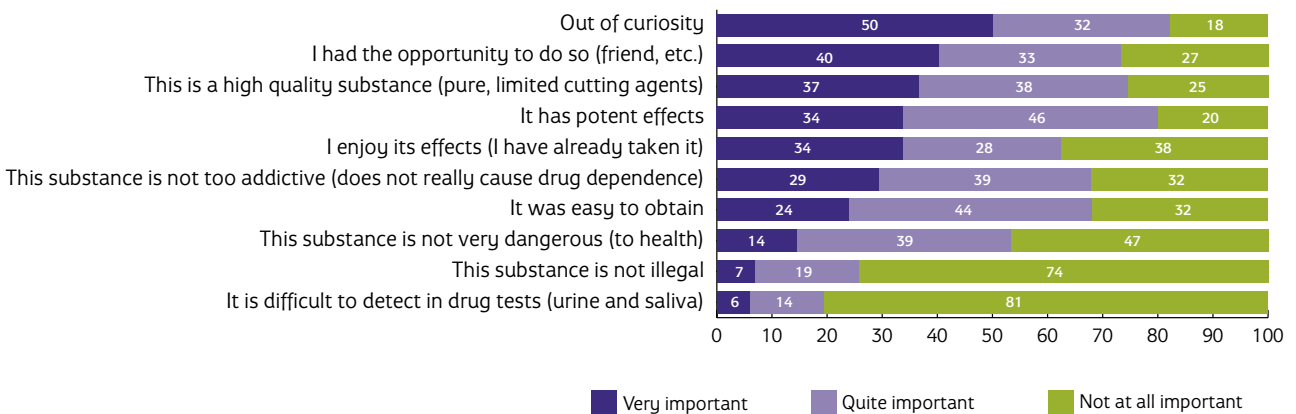
**Table 1 - Substances used in the last 12 months (N = 373)**

Substances	%
2C-x (Phenethylamine)	38
Methoxétamine (MXE) (Other dissociative hallucinogen)	34
4-MMC or mephedrone (Cathinone)	20
25x-NBOMe (Phenethylamine)	18
Methylone (Cathinone)	17
x-FA (Phenethylamine)	13
4-MEC (Cathinone)	12
x-APB (Other stimulant + hallucinogen)	12
Dextrométhorphane (Other dissociative hallucinogen)	11
AKB-48F (Cannabinoid)	10
Ethylphenidate (Other stimulant)	9
Methiopropamine (MPA) (Other stimulant + hallucinogen)	9
3-MMC (Cathinone)	9
AM-2201 (Cannabinoid)	8
DOx (Phenethylamine)	6
MDPV (Cathinone)	6
5-MeO-DALT (Tryptamine)	6
BONG BASTIC (brand, miscellaneous substances)	5
JWH-x (Cannabinoid)	5
UR-144 (Cannabinoid)	5
AMT (Tryptamine)	5
2-MeO-Ketamine (Other dissociative hallucinogen)	5
...	
Name not known	28

Notes : citations limited to 10.

Source : I-TREND Online survey OFDT, 2014

**Figure 3. Reasons for choosing the last substance used (N = 355) (%)**



Source : I-TREND Online survey OFDT, 2014

Among last year NPS users<sup>15</sup>, the frequencies of use give rise to highly variable profiles. Half of these users had less than 10 sessions<sup>16</sup> of last year use, with 3 out of 5 having less than 4 sessions. The other half, described herein as "regular" users, mention more than 10 sessions of last year use: of these, a minority of users (1 in 10) reports more than 20 sessions in the last year and at least 10 in the last month. Lastly, 1 out of 10 users report more than 20 sessions of last year use, but none in the last month, suggesting intermittent use, organised in phases (holidays for example), cessation of use, or inconsistent responses.

### Preference for hallucinogenic effects

The substances most widely consumed in the past 12 months<sup>17</sup> by users able to name them or identify the type (i.e. 7 out of 10 individuals) are those belonging to the 2C-x series (38%) and methoxetamine (34%), both of which have hallucinogenic effects, like 25x-NBOMe (18%), which, overall, rank in 4<sup>th</sup> place (Table 1). Stimulants also feature among the most widely consumed substances, 4-MMC (mephedrone, 20%), methylone (17%), the x-FA series (13%), 4-MEC, etc., ranking in 3<sup>rd</sup> and 5<sup>th</sup> place, and onwards. Fairly few French respondents used brand names to describe NPS<sup>18</sup>.

As regards the most recently consumed NPS, 70 different substances are mentioned out of 165 responses and only a few manage to attract a significant proportion of responses. Overall, the table seems to match last year use: the leading substance is, by far, methoxet-

**Table 2 - Most widely consumed NPS classes at last use (N = 370)**

Class	%
Phenethylamines	28.4
Cathinones	11.4
Arylcyclohexylamines	10
Cannabinoids	8.9
Tryptamines	6.2
Piperidines	4.6
Opioids	4.3
Arylalkylamines	4.1
Other	9.7
Don't know	12.4
Total	100

Source : I-TREND Online survey OFDT, 2014

### About NPS categories

The substances are classified according to their chemical structure.

The main categories in circulation are:

- ✓ **cannabinoids** (JWH-018, AKB-48, AB-FUBINACA, etc.), which may be applied to herbal blends (Spice, Gorilla, etc.), and imitate the effects of cannabis with considerably higher potency in general;
- ✓ **cathinones** (mephedrone, 4-MEC, a-PVP, etc.), with somewhat empathogenic and stimulant effects;
- ✓ **phenethylamines**, part of which tends to give rise to psychedelic hallucinogenic effects<sup>19</sup>, like LSD (2C-x, 25x-NBOMe, etc.), and the other, somewhat stimulant effects (x-FA, for example);
- ✓ **tryptamines** (5-MeO-DMT for example), psychedelic hallucinogens;
- ✓ **arylalkylamines** (6-APB, bromo-dragonfly, etc.), hallucinogens, stimulants and empathogens;
- ✓ **opioids**, which imitate the effects of opiates.

Certain substances have a wide audience, even though the class to which they belong does not attract special interest. These include:

- ✓ **methoxetamine**, (arylcyclohexylamine class). This is a somewhat dissociative hallucinogen<sup>20</sup>, like ketamine;
- ✓ **ethylphenidate** (piperidine class); this is a stimulant similar to methylphenidate (Ritalin<sup>21</sup>);
- ✓ **dextromethorphan**, a cough medicine used as a drug for its slightly dissociative effect.

amine (14%), followed by ethylphenidate (6%). The 2C-x series represents approximately 20% of the latter use (B and P in the lead) whereas NBOMe account for 7% (25-I in the lead), confirming the interest in phenethylamines which correspond to 28% of the last substances used. Cathinones, the second most widely used chemical class, only account for 11% of users (Table 2). Synthetic cannabinoids (SC), which could have been thought to be among the most widely used NPS, only account for a tenth of substances reported to be used last. This finding can be explained by several assumptions. General population surveys have measured the lifetime use of SC (see introduction) [2], but not repeated use. Now, it is plausible that this type of repeated use could be limited, given the unpleasant experiences of certain smokers and the rapidly growing access to increasingly stronger cannabis in France [9]. Furthermore, the SC market could more specifically reach users unfamiliar with drugs or NPS [10, 1] with limited representation in this survey owing to its recruitment methods. In contrast, users who claimed to take a SC during their last NPS use are generally polydrug users, taking into account use in the last 12 months, even if this use predominantly takes place in a private setting (82% vs. 56%<sup>★★</sup>).

### Predominantly ingested or snorted

The methods of use predominantly featuring during last use, for all NPS combined, correspond to ingestion (48%) and snorting (39%). However, variations exist according to the type of substance: hence, the oral route was largely preferred for arylalkylamine use (x-APB for example, 8 out of 10 users),

phenethylamine use (25x-NBOMe, 2C-x..., 73%), or even when the user was unable to indicate the substance used (61%). Snorting appears to be the preferred method for methoxetamine (84%) or for cathinones (mephedrone, x-MEC..., 74%). Cannabinoids are, logically, smoked (with combustion) or the fumes are inhaled (85% and 25% of users, respectively). Very few respondents claimed to have used the injection method during last use (fewer than 4% of respondents), practically all in a private setting. Lastly, the sublingual route, rarely reported, was particularly used for phenethylamines, mainly NBOMe.

### Frequent adverse effects

Slightly over 4 out of 10 users experienced adverse effects following last use. Recourse to a health professional, reported by less than 4% of the users concerned, remains low, although the effects do not always appear harmless: symptoms such as "paranoia, fear and anxiety" occurred during 16% of instances of last use, "accelerated heart rate" in 14% of cases, "cramps/contraction of the jaw", "headaches", "hot flushes" and "nausea or vomiting" were each reported by more than 10% of users. The frequency of reporting for physical adverse effects is similar to that

15. 92% of which in the "Ascertained users" group.

16. A session of use may include several intakes.

17. Ten substances maximum could be ticked or mentioned.

18. For comparison, young Polish users, in particular, mainly mention brand names.

19. Refer to the distortion of perception possibly going as far as hallucinations, which may be accompanied by delusions and a strange perception of oneself and the world, induced by intake of certain hallucinogenic substances.

20. Feeling of dissociation between physical sensations and the mind.

21. Medication used for attention-deficit/hyperactivity disorder.

for psychological effects (30% and 35%, respectively). However, the latter could be more common when the user is alone (39% vs. 28% when in a group). This observation nonetheless remains hypothetical, as this difference does not appear to be statistically significant.

**■ Purchasing practices**

**Only one in two users buy online**

Approximately half of respondents having used a NPS purchased the substance themselves online, regarding last use (42%) or last year habits (55%). The most recently used NPS was a gift for one in four users (24%), or was purchased from a friend not considered a dealer by 15% of respondents, and from a dealer in 12% of cases. Direct online purchases (in the last year) appear to be more frequent among older users, with 71% of over-34 year-olds making online purchases, vs. 51%\*\* of younger respondents.

**"RC" shops highly attractive**

The respondents who purchased a NPS online in the last year, clearly turned to RC shops, i.e. websites which refer to NPS by their chemical names. Hence, 77% of purchasers placed orders on these sites in the last year and one in two ordered from them exclusively. Only one in five purchasers (22%) reports the use of a "commercial" site, i.e. particularly targeting people unfamiliar with NPS and chemical names by using brand names, and colourful packs with an attractive design. Nearly a quarter of online purchasers went

through the deep web, thus confirming a trend observed in qualitative terms [9]. Only 14% of under-25s ordered from a commercial site (vs. 36%\*\* of over-34 year-olds), a category which is supposed to specifically attract the younger population. However, twice as many under-25s compared to the older population use the deep web<sup>22</sup> (33% vs. 15%\*\*), probably a generational practice which will continue to develop. Moreover, if the number of orders in the year is taken into account, the proportion of repeat purchases is seen to be higher for RC shops, then on the deep web, than on commercial sites.

The choice of sites is mainly based on criteria in terms of experience: more than half of respondents (55 %) claim that they take into account sites evaluating online shops, 42 % rely on their own experience and 37 % follow the advice of other purchasers. Less frequently, more specific criteria are put forward, rather focusing on security ("the site uses a secure payment method" 31%, "NPS are dispatched in discreet packaging", cited by 26 % of purchasers), or on the quality of supply ("NPS are better quality than on other sites", cited by 29%, "the NPS I was looking for was not available on other sites", 16%)<sup>23</sup>.

**From small-scale purchasers to user-dealers**

A quarter (27%) of last year online purchasers only placed a single order over the period and half (51%), between two and five. The other respondents placed orders more regularly: 11% placed 6 to 10 orders and 12% placed more than 10 during the year. All of these purchasers

spent approximately one hundred euros on average (€99) on the last order, but half spent less than €59 (median value); the most common expenditure amounts to €50 (19% of respondents). A quarter of these purchasers, however, claimed to have spent more than €100, while the maximum amount reported was over €700. It is plausible that this level of expenditure is for group purchases or even for dealing, a situation which appears to be consistent with the fact that approximately only one in two users claim to buy directly online. In addition, the more respondents claim to have placed orders regularly in the last year, the higher the mean and median amounts spent at the time of the last online purchase, to some extent widening the gap between small and large-scale purchasers: the median amount spent by respondents only making a single purchase during this period is equal to €48; this reaches €110 for those making more than ten. Only 3% of purchasers ordered more than 5 different substances at their last order, and half only ordered a single substance.

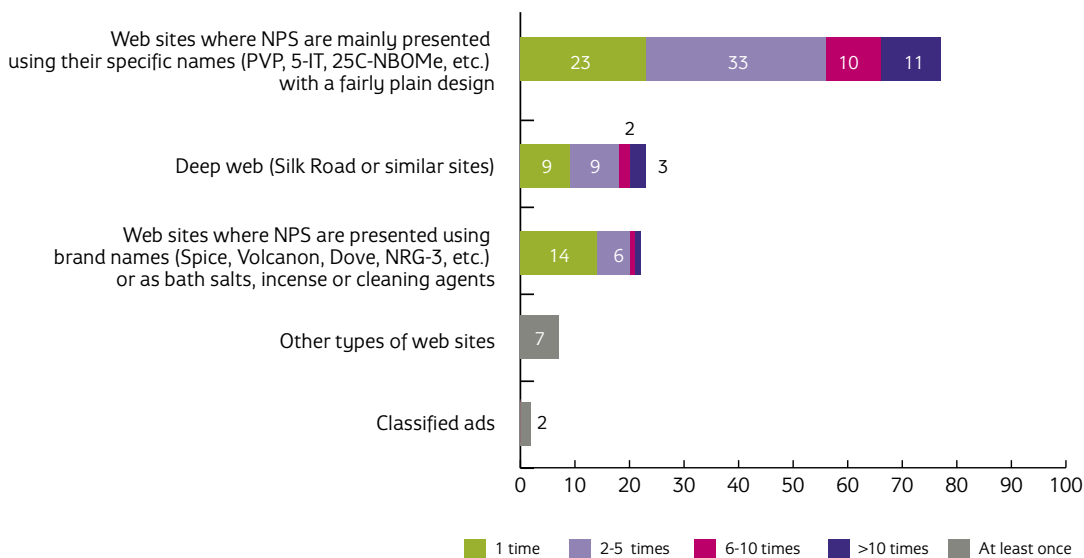
**■ Information**

The expressed need for information concerning the last substance used in the year mainly involves health risks: 64% of users believe that they do not have sufficient information on this matter, and 44% on the dose not to be

<sup>22</sup>. Internet not indexed by search engines, which can only be accessed via a specific address.

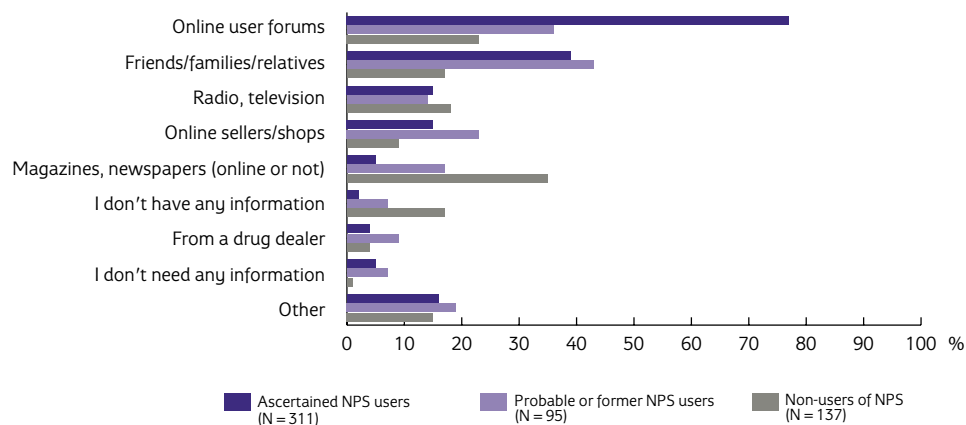
<sup>23</sup>. The correlations observed between the responses show that the respondents prefer either security (payment, discreet packaging, etc.), or quality.

**Figure 4. NPS purchasing frequency according to websites, among users having made online purchases in the year prior to the survey (N = 185), %**



Source: I-TREND Online survey OFDT, 2014

Figure 5. Sources of information consulted by users



Source: I-TREND Online survey OFDT, 2014

exceeded. Conversely, the respondents believe they have sufficient information (between 75% and 85%) on the pattern of use, the legal status of the substance, its anticipated effects and the dose to be taken to achieve these effects. However, it should be stated that only users having consumed NPS in the last year were asked this question, i.e. mainly "Ascertained users" who display better mastery of this area than other groups. When all respondents were asked (Table 3) to give their opinion on certain claims relating to NPS, the proportion of responses corresponding to "Don't know" gradually increased as familiarity of the groups with NPS decreased, systemically reaching 60% in the "Non-users of NPS" group. Among users having taken a NPS in the past 12 months, it is when substance use takes place in a conventional recreational setting that these users most often claim to have insufficient information<sup>24</sup> or to have no idea regarding the statements in the questionnaire. These proportions are lower among users in the alterna-

tive recreational setting and even lower in the private setting, revealing different levels of knowledge in these overall populations.

The first source of information utilised by respondents concerning NPS involves user forums consulted by 56% of respondents, particularly "Ascertained users" (77%), whereas fewer respondents in the other two groups show interest in this source (36%\*\* and 23%\*\*\*) (Figure 5). They tend to visit French-speaking forums (8 out of 10 cases) or English-speaking forums (3 out of 10 cases), while some visit both. Friends, family or relatives represent the second source of information, for 34% of respondents, ranked as the leading source of information for "Probable or former NPS users". The media (television, radio, newspapers) is mentioned by only 15% of users, but appears to be the leading source of information for the "Non-users of NPS" group (35%). Hence, the weaker the relationship with NPS, the more users have access to "second-hand" information.

### Opinions on NPS

At the end of the questionnaire, users were asked for their opinion on the four claims shown in Table 3.

All of the opinions expressed suggest that the majority of respondents do not perceive any fundamental differences between NPS, considered overall, and established drugs in terms of quality or potency of effects (statements 2 and 4).

However, these perceptions differ according to the various substances, as shown by the selection criteria for the last substance used, described in

an earlier question. "Better quality" or "stronger effects" play a "fairly" or "very" important role in the choice of a given substance, for 75% and 80% of users, respectively.

The various positions seem considerably more clear-cut when the items relate to the possible lower danger of NPS (statements 1 and 3).

Once again, the distrust with regard to these substances is the same as for established drugs. However, by selecting the response "yes, I agree for some NPS" for the statements on the lower danger and less addictive nature of NPS, approximately one-third of users suggest that some NPS might be less harmful than others.

This opinion is adopted by more than half of the group which seems the most familiar with NPS.

24. Except for routes of administration for which all users tend to be relatively well informed.

Table 3 - General opinion (in %) on NPS

N = 522	Yes, I agree, for most NPS	Yes, I agree, for some NPS	No, I disagree	I don't know
(1) New psychoactive substances are less dangerous than illicit substances	14	28	29	29
(2) New psychoactive substances are of better quality than illicit substances (purer, less cutting)	2	14	52	32
(3) New psychoactive substances are less addictive than illicit substances	11	35	28	25
(4) The effects of new psychoactive substances are more powerful than illicit substances	3	8	63	26

Source: I-TREND Online survey OFDT, 2014

## ■ Conclusion

In spite of the limits shared by this type of online survey, notably related to the absence of sampling [11], this study was able to provide information both on user profiles and the distribution methods for NPS. However, these results should be considered as more than likely only offering an incomplete perspective on all NPS users in France.

Firstly, these results substantiate the assumption for NPS diffusion mainly among individuals who are already amateurs of psychoactive substances, as NPS do not appear to be a doorway into drug use. Users motivations are consistent with those relating to recreational use of established drugs. Young adults are predominantly concerned, together with a proportion of older individuals, as suggested by the qualitative findings. This does not mean that younger people are not affected (3% of respondents are minors and 13% are aged under 20), as it is likely that many will not have been aware of this survey. However, NPS use among the younger population seems to have developed more slowly compared to other European countries [12, 1]. While most use observed among survey respondents takes place in a private setting (home), 40% of last use intakes took place in a recreational setting, half of which in a conventional setting (bars, clubs, etc.) and half outdoors (alternative recreational setting), thus confirming NPS diffusion in these environments [10]. Furthermore, the survey did not reveal any new emerging populations specific to NPS, particularly populations only using synthetic cannabinoids as a substitute for cannabis use, either because promotion of the survey failed to reach them, or because they felt a survey on NPS did not apply to them, or because this is ultimately a marginal profile. Evidence-based data confirm the existence of various user populations whose levels of knowledge of this complex field are very diverse. [9]. However, the survey made it possible to describe the practices of regular users, together with their preference for hallucinogenic effects. The context of last use, predominantly in a private setting, and the degree of social integration of the respondents<sup>25</sup> confirm the hidden nature of a certain extent of NPS use.

While it was predictable that not all users purchase the substances used directly online, the proportion of respondents concerned (approximately half) revealed the potential for diffusion of substances beyond the online purchasers. This is particularly the case since certain quantities reported to have been ordered online seemed to be on the scale of dealing.

The survey also highlights the expectations and practices of the respondents in terms of information and representation of NPS. The first group (Ascertained NPS users) are very regular visitors to specialist discussion forums, also consulted, but to a slightly lesser extent, by the second group of users (Probable NPS users), who usually gain information from members of their circles. Lastly, the most peripheral group mainly obtains its knowledge from the media. Hence, user forums clearly represent a particularly suitable medium for delivering messages on harm reduction measures; however, it would also seem appropriate to provide communication aimed at populations less familiar with NPS, via the various media. This could be the case, for example, in a conventional recreational setting where users would appear to be less informed overall compared to other users. However, over and above the reports, it would be worthwhile assessing the suitability of users' knowledge with regard to the actual reality.

Overall, the respondents display a fairly rational vision of NPS, and fear their dangers, as shown by the expressed need for information and a propensity not to consider these substances as a category, but rather to assess each substance individually. This fear seems to be well founded, given the frequency of adverse effects associated with the last use, reported by 40% of respondents. These risks are to be taken into consideration, particularly since 17% of last year users claimed to have used them alone at home.

25. Even though the most precarious users were not expected to be able to respond to this survey and were not its prime target.

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French Monitoring Centre for Drugs and Drug Addiction  
3, avenue du Stade-de-France  
93218 Saint-Denis La Plaine cedex  
Tel. : (+ 33) 1 41 62 77 16 / Fax : (+ 33) 1 41 62 77 00  
e-mail : ofdt@ofdt.fr



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