

MINISTRY OF ADMINISTRATION
AND INTERIOR



NATIONAL ANTI-DRUG AGENCY



Risk assessment of new psychoactive substances consumption among children and youth in Romania

Research report

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The content of this material represents the author's point of view, and not necessarily that of UNICEF Romania.

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Abbreviations

ANA	Agenția Națională Antidrog (National Anti-drug Agency)
ARAS	Asociația Română Anti-SIDA (Romanian Anti-AIDS Association)
ALIAT	Alianța de Luptă Împotriva Alcoolismului și Toxicomaniilor (The Alliance for Fight against Alcoholism and Addictions)
ANIT	Asociația Națională de Intervenții în Toxicomanii (The National Association for Interventions in Addictions)
CPECA	Centrul de Prevenire, Evaluare și Consiliere Antidrog (Anti-drug Prevention, Assessment and Counselling Centre)
DGASPC	Direcția Generală de Asistență Socială și Protecția Copilului (The General Department for Child Care and Protection)
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
IGPR	Inspectoratul General al Poliției Române (Romanian Police General Inspectorate)
RHRN	Romanian Harm Reduction Network
UNICEF	United Nations International Children's Fund
UNODC	United Nations Office on Drugs and Crime
NPS	New Psychoactive Substances

Foreword

It is becoming ever more obvious that international drug consumption has been marked by a change in paradigm in recent years. While cocaine, heroin and cannabis global markets have shrunk or stabilized, the production and illicit consumption of prescription opiates and new synthetic drugs („spice“-type synthetic cannabinoids) have increased. Moreover, the demand in substances that are not internationally regulated, like piperazine and cathinone, has actually exploded, according to the *2011 Global Report on Drugs*, simultaneously launched in New York and Vienna. In particular, due to lack of adequate regulations, an increasing number of new synthetic substances are becoming popular amongst users, being extremely available and accessible especially to young people.

This phenomenon represents both a challenge and an important pressure for national policy and response strategy development systems, requiring a meaningful rethinking and reorganizing of traditional political, juridical and operational tools and approaches.

Various empirical data indicate within the last year, in our country, an alarming evolution of new psychoactive substances (NPS) consumption, improperly designated as „legal highs“ or „ethno-botanicals“. In its most recent *General Population Study on Drug Consumption Knowledge, Attitudes, Practices and Prevalence* (2010), conducted by the National Anti-drug Agency, the large NPS category reached the highest prevalence, above cannabis (the most consumed substance in previous years).

Using a large variety of information sources, ranging from online data to approaching large categories of social and institutional actors that made contact with the target population and also a sample of heavy users selected from major cities in Romania, the present study goes further and identifies the dangers attached to NPS consumption, especially if one considers the alarming situation of injecting NPS.

The study attempts to thoroughly present the dimensions of the NPS consumption phenomenon, medical risks of abuse and addiction potential, as well as development risks of associated disorders and diseases, epidemiological risks on prevalence potential among vulnerable categories, social and organized crime activities risks.

Consistent with approaching the drug demand and supply phenomenon on a scientific basis, I believe that this study offers the possibility to ground some interventions tailored to local patterns of NPS consumption, as well as a real support for developing coherent policies of demand control and reduction.

Police Quaestor Sorin Oprea
Director of National Anti-drug Agency

New psychoactive substances (NPS, also known as „ethno-botanicals”) consumption has become a serious phenomenon considering the negative effects it has on children and teenagers’ lives, and also the obvious rapid increase of consumption in the general population.

To give an effective response to NPS consumption by children and teenagers, we need a better understanding of the way they think and act, of their values, beliefs, goals, manner of assuming risks and the measures they take to protect themselves.

This study makes a decisive contribution to understanding how NPS consumption has affected children and teenagers’ lives and offers recommendations to decision makers and service providers for developing prevention policies and adjusting services to young people who consume NPS.

The study follows the line of conclusions reached by other studies that consider as necessary the change of policies and services to meet the needs of children and teenagers that consume NPS by offering them access to social and medical services. Discarding age limitations in accessing harm reduction, rehabilitation, medical and social services leads in time to a lower level in drug use risks, including HIV and hepatitis infection risks in children and teenagers consuming NPS.

This report is a call to protecting the rights and dignity of vulnerable children and to developing an environment of equity, trust and care.

Last, but not least, this text should be read by all people and experts concerned with children and teenagers welfare.

Edmond McLoughney
UNICEF Romania

Abstract

The present study is a research in the new psychoactive substances (NPS) consumption in Romania conducted on two levels: the empirical level – a field qualitative study in ten major cities of Romania; and a secondary analysis of various data and information from scientific and online media.

The main purpose is a quick survey on new psychoactive substances (NPS) consumption – aka „legal highs” or „ethno-botanicals”¹ – patterns of consumption and associated risks in 120 children and teens from ten major cities in Romania.² This is a first step towards developing a set of measures and actions to reduce NPS demand by documenting the phenomenon, and also to adapt the social and medical actions to the needs of the children and teens that are consuming NPS.

The present study also includes data on the physical and chemical properties of the new substances, as well as health, social and organized crime related risks of psychoactive substances (ethno-botanicals) consumption in the major urban areas.

Our study is based on multiple sources:

- Information from specialized labs;
- Accounts on the effects upon users and information (from biological and psychological points of view) collected during field research;
- Epidemiological data;
- Sociological data;
- Criminological data.

To get the clearest image on the phenomenon, beyond what we get from the officials, the media and those linked to the „dream” shops, our research also uses online data (forums/ search engines/ snapshots of websites containing revealing information). This is completed with information from national and international scientific literature on the phenomenon, as well as field data collected through a national project that took place in ten major cities out of the 8 Euro-regions of Romania, consisting of:

- Interviews with representatives of local authorities and NGOs;
- Questionnaires addressed to NPS users;
- Questionnaires addressed to persons linked to NPS selling.

Data analysis allowed us to define the context and scope of this phenomenon, to compare and to complete all the information collected. In order to assess the value of the data, the research team focused on describing the social context of its collection, on target group selection, on NPS consumption methods and available services to NPS users.

All these enabled us to derive a series of conclusions and recommendations. Although they are primarily addressed to decision makers and professionals, the subject may be nonetheless of interest to the general public.

¹ The improper term by which they came to be known and sold in Romania. Also, the Romanian word for „illegal drug” is just „drug”, the latter lacking the meaning of „medication”.

² Bucharest, Constanța, Timișoara, Cluj, Iași, Ploiești, Galați, Craiova, Brașov and Oradea.

I. Conclusions and recommendations

1. Conclusions

Main conclusions

- New psychoactive substances („ethno-botanicals”) consumption has begun in 2008 and since then it has grown and developed rapidly, with variations determined by government control measures.
- According to their presentation form, **NPS sold as „legal highs”** come in two variations:
 - A. **Plants and chemicals blend for smoking** – „Spice” products;
 - B. **Chemicals blend for injecting or sniffing** – psychoactive synthetic substances with energizing or hallucinogenic effects, sold under various names and mixed with well-known stimulants: caffeine, creatine, etc.
- The two options have about the same success: interviewed people consume mainly „Spice” products (56.1%), while stimulant substances are consumed at a lower, but close, rate (43.9%).
- By confronting data from different sources, we found out that the most popular brands in Romania at the time of the research were *Diesel*, *Pure*, *Katana* and *Magic*.
- The synthetic substances we have mentioned here are but a few from what the market has to offer. These products change often, as well as the ingredients and their concentration in substances sold under the same name. Also, the commercial names change often, so associating certain substances with a certain brand becomes a difficult task.
- There is no conclusive data on the role of organized crime in the distribution of NPS, **but there may appear organized structures in trafficking blacklisted substances**. There are testimonies regarding pupils that became involved with underworld criminals in view of selling these types of substances.
- Half of the interviewed users (60) support banning „dream” shops. Seven of them are against the ban, and the rest (52) are being sceptical regarding the effectiveness of these measures (this view is shared also by „dream” shops” owners), considering that the NPS commerce will just go online.

User profile

- NPS consumption is not in hiding, the majority of users being socially integrated middle-class children and teens. This category of users tends to experiment upon different substance combinations as the NPS status and selling are not yet regulated.
- There is enough evidence regarding NPS multi-consumption in heavy users. More than half of those interviewed declared that they had consumed several types of „legal” products in the last 30 days. Besides alcohol and „legal highs”, the consumption includes different types of illegal drugs or prescription medication:

heroin, amphetamines, „aurolac“ (solvent with hallucinogenic effects), cocaine, cannabis, glue vapours, diazepam, valium, rofedex, tusin.

- NPS users are aged between 11 and 40 years. Again, there is a significant consumption in the category of children up to 15 years. Three quarters of the interviewed users are male – this is consistent with the classic drug use pattern.
- The favourite places for consumption are on the streets and at home. The rate of consumption depends on finances, and also on the getting together with friends. The majority of the interviewed users say that they prefer to consume NPS with friends.
- The money spent by consistent users range between 10 RON and 300 RON. The average is 53 RON per day.
- There are multiple sources for buying NPS: the majority of those interviewed declared that they usually get them from „spice shops“ or „weed shops“.

Substances, effects, risks

- Different NPS are usually mixed and portioned based upon unknown recipes and concentrations, and then are packed for selling.
- Information on product contents and on their effects on health is scarce or completely missing. Scientific literature shows that these substances pose serious health risks.
- There is no data on how NPS interact with other substances like alcohol, prescription medication or illegal drugs.
- According to experts, there is a high epidemiological risk regarding NPS prevalence because users are very well acquainted with modern instruments of communication (forums, blogs, chat, etc.) through which they may share experiences and order „at home“ NPS promoted by online marketing.
- An alarming area is the intravenous consumption of NPS: 1 in 6 respondents declare they inject NPS. Most of them are in Bucharest. The major risks regarding these users is getting infected and transmitting various diseases by sharing syringes. As to respondents' STD and blood-borne disease status, 1 in 3 injecting drug users are HCV positive, 3 respondents are HBV positive and 1 HIV positive.
- NPS consumption may lead to serious health problems: weight loss, appetite loss, personality disorders, psychotic disorders, prolonged insomnia, cachexia. After a period of time, depending on administration method, consumption rate and user's lifestyle, these may cause death. Specialists mentioned cases of injecting drug users that died after changing heroin for „ethno-botanicals“.
- Information on social risks associated with „ethno-botanicals“ consumption is scarce.
- Education and work may be disrupted by constant NPS consumption. Long-term risks include social exclusion, education interruption, career problems and decay of moral values. Delinquent behaviour appears as heavy consumption or addiction gets critical. These users may resort to crimes in order to compensate the high costs required to maintain a steady level of consumption.

Services – access and availability

- More than 25% of respondents needed medical attention because NPS consumption. Most of them had to go to emergency room. Other services used were detoxification, psychiatry and psychological counselling.

- The rates of access to and availability of social and medical services are low, this leading to medium- and long-term risks regarding the users' medical and social integrity.

2. Recommendations

One of the main purposes of the present study is defining a set of recommendations regarding actions to reduce NPS demand and identifying adequate strategies for problems generated by NPS consumption. The following recommendations are based on proposals collected from interviewed experts, children and teens.

Our proposals have been categorized considering actors and decision makers from various levels of society who may have a say about any kind of drug consumption.

Recommendations for decision makers

1. Developing a civil and criminal law infrastructure that would allow implementing effective measures for controlling NPS and reducing harms associated with NPS consumption according to scientific studies and human rights, with a stress on actions directed towards children and young people.
2. Discarding legal barriers that impede on specialized services (syringe exchange programs, opiate substitute treatment, sexual health, access to medical services) being accessed by socially and medically at-risk children and young people.
3. Developing an early warning system regarding NPS apparition and evolution to keep an up-to-date list with the substances on the market.
4. Categorizing NPS in classes according to chemical structure, effects and other criteria in view of a better image on the situation.
5. Developing NPS identification labs to test the products on the market so as to generate conclusive data necessary for effective control policies.
6. Collecting information in a consistent manner on NPS users to allow for developing actions adequate to the needs of the at-risk categories.
7. Supporting research, actions, expert training and scientific evidence-based policy-making and according to the experience of EU states that deal with the same situation.

Recommendations for the academia

1. Carrying on research on NPS consumption risks to document knowledge, attitudes and practices regarding children, teens and young people's consumption – these categories being most affected by NPS.
2. Studying NPS consumption patterns in children and teenagers.
3. Documenting social and medical risks associated with NPS consumption.
4. Developing plans for public policies and strategies regarding drug consumption considering the constant changes brought by globalization, IT and new scientific discoveries in chemistry and pharmacology.

Recommendations for service providers

1. Adapting harm reduction programs by developing interventions tailored to the needs and particularities of NPS users.
2. Continuous and consistent NPS consumption preventing actions at school, family and community levels to reinforce protection against drug consumption.

3. Producing educational material regarding NPS effects, risks, interactions with other substances, available services, etc.
4. Developing prevention, information and educational programs through peer education and with support from young people that have NPS experience.
5. Adapting existing medical and social programs to preventing and stopping NPS consumption.
6. Increasing the ability to identify, absorb and refer children and young people with NPS problems within the integrated system of services.
7. Initiating NPS side-effects information campaigns adapted to young people's needs and style.
8. Training experts for work with young drug users so as to equip them with the necessary knowledge, attitudes and skills for offering services adapted to the needs of their clients, respecting the limits imposed by the professional ethics and deontology for this at-risk category.

3. Study limitations

By its sheer novelty, the present study encountered limitations from the start imposed by the lack of preceding studies and conclusive information based on other studies, the conclusions we extracted being per se milestones in drawing an image of this rapid growing phenomenon in Romania and in Europe (Great Britain being a telling example).

II. Research background

In recent years, an important number of new psychoactive substances¹ have been made available to the general consumption, affecting especially young people. The main causes of this phenomenon include:

- The explosion of mass communication media – Internet and social networks;
- The free trade of goods within the EU;
- Increased research in the synthesis of psychoactive substances field.

The scientific literature on drug consumption and data from field studies are somewhat out of sync with this rapid growing phenomenon throughout Europe. This leads to difficulties in documenting short- and long-term effects and features of NPS abuse. As a further consequence, evaluating risks and developing effective policies regarding NPS abuse are difficult tasks.

At international level there is a rapid change of paradigm in producing, distributing and consuming NPS as a result of globalization. This needs to be addressed by a renewal in the existing methods of preventing, educating, social work and treatment, as well as by developing new strategies adapted to the new situation.

NPS sold as „ethno-botanicals“ (like *synthetic cannabinoids* or *amphetamine type stimulants* – ATS) appeared internationally through online retail networks and physical shops around 2006. In Romania this happened at the end of 2008, quickly becoming very popular amongst young people.

EMCDDA annual report² states that NPS are widespread and available at an „unprecedented pace“. It also states that in 2010 a record number of new drugs (41) were announced to EMCDDA and Europol through the European Early Warning System (EWS). This number surpasses all preceding years, e.g. 24 new substances were found in 2009 and 13 in 2008. The list attached to the report shows a vast array of substances: synthetic cannabinoids, synthetic cathinones and piperazines, other new types of synthetic substances similar to existing drugs, as well as plant based psychoactive substances.

To address public health issues generated by NPS consumption, at least 16 EU countries implemented measures to outlaw or control „Spice“ products and their derivatives.

EMCDDA is constantly monitoring online availability of NPS. An online snapshot research³ from 2009 identified 115 online shops specialized in commercializing „legal highs“ at European level. Based on internet country code top-level domains or other

¹ We included here all substances sold as „ethno-botanical plants/substances“, as well as other synthetic drugs, prescription medication and food supplements.

² European, Monitoring Center for Drugs and Drug Addiction, <http://www.emcdda.europa.eu/news/2011/1>

³ This study targeted online shops available to European internet users interested in buying „legal highs“ (including „Spice“), GBH/GBL or hallucinogenic mushrooms.

geographical indications, the majority of these shops were found to be in Great Britain (37%), Germany (15%), Netherlands (14%) and Romania (7%).

This shows Romania as being one of the top four countries regarding NPS commerce. In a 2010 snapshot research, the number of online shops selling „legal highs/ethno-botanicals” increased at European level to 136, but suddenly decreased in Romania compared to the precedent year. This may be explained by the online shops owners” reaction to the legal measures of controlling an important number of NPS sold as „legal highs”: these were hidden by changing the country code top-level domain to .com or .net, or even using other countries” domains, as well as changing the promoting tactics – less explicit and limited to already existent users” networks.

The measures developed and implemented in Romania, based on available empirical data collected nationwide by the authorities, focused on emphasizing NPS consumption as a national, social and medical safety matter, and lead to the reinstatement of the National Anti-drug Agency (ANA), through GD 461/2011, as a public order and safety institution. The central and local authorities took up certain measures to reduce NPS consumption amongst the general public:

- The main solution to this problem was restricting „dream shops” from being opened near schools or other areas of interest for the general public, which halted their geographical spreading. Part of the existing shops in these areas were closed by local authorities;
- Another solution was creating local mixed control teams, including representatives of city hall, police, OPC (the national authority for consumer protection) and other institutions relevant to public health to frequently raid these shops in search of product nonconformities.

When our research took place (April 2011), there were only 91 „dream shops”, compared to 373 in 2010. Of the latter, 336 were actual retail shops, the rest being online shops and deposit spaces.⁴ It may be assumed that the decrease in the number of shops, as well as their migration towards the online space are a consequence of the central and local authorities” efforts to close down these shops.

Again, it is difficult to access data on the magnitude of this phenomenon and its collection lacks coordination. The results of online or offline surveys are shallow and rather descriptive in nature. They provide an image on the recent tendencies and changes that took place in our country and that can be compared with the European trends, but they do not offer conclusive answers to the prevalence of NPS consumption among the general public and the magnitude of the phenomenon throughout the country.

⁴ http://www.igpr.ro/relatii_publice/detalii.aspx?id=8161

1. Legal measures in Europe and Romania

NPS consumption led to taking certain legal measures at European level.

The measures pertain to the following categories:

1. Restrictive measures with serious criminal implications (including NPS within the category of risk and high-risk drugs)

a) *There are two types of definitions given to these substances:*

- A generic definition of a family of substances that takes into account the derivatives with a main molecule in their structure;
- An analogue definition that includes all substances with similar pharmacological effects and chemical structure or, in some cases, those derived from the main substance.

b) *Depending on law type, controlled substances are:*

- Drugs explicitly enumerated in an appendix to the national law on drugs (situation existent in 14 countries);
- Substances controlled by special laws, directives etc. (11 countries).

Considering the speed with which new substances and chemicals appear on the market, an important issue is the decisional level at which these lists may be changed, because this level also affects the time it takes for the decision to be adopted:

- One ministry/agency in 11 EU countries;
- Two ministries in 2 countries;
- The government in 6 countries;
- The Parliament (sometimes the measure must be approved by the head of state) in 13 countries.

2. Restrictions for selling exclusively under medical supervision (medication control laws)

Austria, Denmark, Estonia, The Netherlands, Finland, Great Britain and Norway decided that certain NPS are „medication”, but they did not authorize their commerce.

Other countries use definitions similar to the following: *any substance that may be consumed by people to alter mental states through pharmacological actions is to be kept under medical supervision.*

3. Forbidding selling without medical supervision

There are restrictions depending on the age of the buyers and the license of the shop. One example is the status of „aurolac”-type solvents in Romania.

4. Unrestricted selling, but monitored by consumer protection agencies, etc.

In Great Britain, where mephedrone was sold as bath salt, the Prime Minister signalled the authorities on the fact that the substance had no use as bath salt and pressed on consumer protection to outlaw and confiscate such merchandise under the laws that forbid promoting a product for other uses than the one declared (Unfair Trading Regulations, 2008).⁵

⁵ Mephedrone has been banned as a recreational drug in GB by the time our study was published.

A quite different model is the Polish law that was the basis for a legal initiative now being debated in the Romanian Parliament. The law regulating sanitary hygiene was adapted so as to counteract drug addiction.

The measures that target NPS control belong to the domain of the National Sanitary Inspectorate, with a focus on emitting authorizations for shops that sell these products. The authorization process is very strict and lengthy. Producing these substances is punishable by fine, and advertising them by imprisonment.

2. NPS consumption in Romania

To analyze trends generated by various NPS and levels of interest in them, the present study processed data on Internet „searches”. This data was obtained from search engines and traffic monitoring sites (Google, Google Insights, Google Adwords, Alexa) and was confronted with information already available from international studies.

The important sites were easily found by the online snapshot technique. By using keywords like „legal highs”, „ethno-botanicals”, „dream shops”, etc., it was possible to build a classification of the substances available online and of the advertising methods. Another important result was obtaining information regarding the popularity of the „legal highs”. In Romania, the term „ethno-botanicals” is best known, being the most used when searching online for NPS.

We tried also to generate statistical data on Google searches. The limitations of this method are obvious with regards to polysemous words/expressions with common meanings. Figure 1 sums up relevant data⁶ from January 2006 till April 2011, with the aid of Google Insights.

In 2008 there is low interest in NPS, the first peak appearing in the first part of 2010. A new peak is recorded in fall 2010, with a slight decrease in the last months of the year. At the beginning of 2011 there is a renewal of interest, this decreasing in April. The top counties are Iași, Cluj and Bucharest.

For a clearer image, Google Insights lists the most frequent searches related to „ethno-botanicals”: „ethno-botanical drugs”, „ethno-botanical plants”, „ethno-botanical shops”, „ethno-botanicals online”, etc. Some of these searches demonstrate the clear intention to buy NPS. A high level of interest is directed towards the legal status of NPS, as well as the effects they induce.

⁶ The figure shows how many searches were conducted for a certain word, compared with the whole of Google online searches throughout time. The numbers do not represent the absolute volume of searches for they are normalized and presented on a scale from 0 to 100. Each point in the figure is divided to the highest peak value or 100. If there is insufficient data, the number 0 appears. The numbers that appear next to the searching words above the figure represent abstracts or totals.

Web Search Interest: etnobotanice

Romania, Jan 2006 - Apr 2011

An improvement to our geographical assignment was applied retroactively from 1/1/2011. [Learn more](#)

Totals
etnobotanice 12

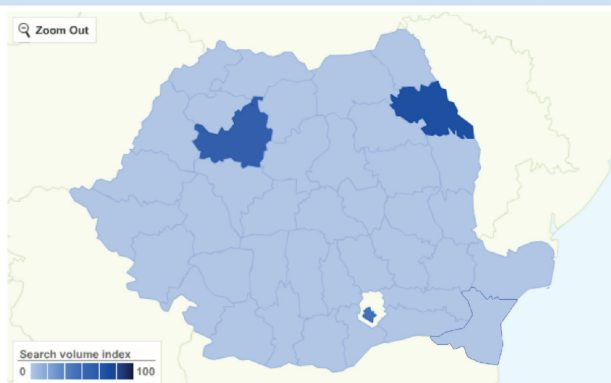
Interest over time forecast News headlines



[Embed this chart](#)

Regional interest Sub-region [Town/City](#)

1. Iași		100
2. Cluj		79
3. Bucharest		68



[View change over time](#)

Figure 1. Level of interest in „ethno-botanicals”

Search terms

Top searches		Rising searches	
1. plante etnobotanice	100	1. despre etnobotanice	Breakout
2. droguri	30	2. droguri	Breakout
3. etnobotanice efecte	25	3. etnobotanice efecte	Breakout
4. etnobotanice legale	25	4. etnobotanice interzise	Breakout
5. magazin etnobotanice	20	5. etnobotanice legale	Breakout
6. magazine etnobotanice	20	6. etnobotanice online	Breakout
7. etnobotanice online	15	7. magazin etnobotanice	Breakout
8. etnobotanice interzise	15	8. magazine etnobotanice	Breakout
9. produse etnobotanice	15	9. plante etnobotanice	Breakout
10. despre etnobotanice	15	10. plantele etnobotanice	Breakout

[Embed this table](#)

[Embed this table](#)

For more reliable data regarding the number of searches, we used Google Adwords⁷. We obtained a list of monthly average searches for „ethno-botanicals” calculated from the last 12 months (till April 2011) – see Appendix 1. As we may see, the monthly average number of searches is 27,100. Besides the direct interest in ethno-botanical

⁷ While Google Insights offers trends, Adwords presents exact data on the monthly average of searches.

plants and substances, there can be seen a clear intention to locate the shops selling them. These figures enabled us to discern the cities with most NPS searches:

1. Bucharest (an average of 496 searches);
2. Cluj (an average of 366 searches);
3. Timișoara (an average of 192 searches).

When the search keyword is associated with the name of a place, there are very high chances that the search had the very practical purpose of buying. Again, there is a high level of interest directed towards the legal status of NPS. Other searches are directed towards NPS effects and finding discussion forums on NPS themes for sharing experiences.

Specific searches, i.e. „sell-substance”, enabled us to discover **160 unique online shops**, some of them having nationwide distribution. One peculiarity about these shops is that different websites may be the online version of the same shop, depending on the marketing strategy adopted by owners.

Our field research revealed that NPS selling takes place also in sex-shops, by field salesmen (home delivery), through online or printed media advertising, making it impossible to give an account on all advertisers.

In response to the alarming rates of NPS consumption, the Ministry of Administration and Interior, through the National Anti-drug Agency, announced the development of a vast **prevention program against the consumption of NPS** sold under the name of „ethno-botanical plants” or „legal highs”. The program, having both general and selective prevention elements, according to the national analysis on health, psychosocial and crime risks attached to NPS consumption and trafficking, will be correlated to the 2005-2012 National Anti-drug Strategy goals with the scope of diminishing consumption and access to NPS by implementing projects and prevention campaigns for the general public and the acknowledged vulnerable categories of population.

The development, implementation and support of the National Anti-drug Strategy is a major objective on the path to building a new set of drug policies, being also a crucial step in creating a complex and integrated intervention capacity from both governmental, and nongovernmental and private service providers. This will form the foundation of consolidating a scientific evidence-based intervention that is adapted to the global market and which has human rights at its core.

III. Research methodology

1. The purpose of this study

The ultimate goal of this study is to contribute to the development of NPS policy recommendations that will allow creating and implementing harm reduction programs by identifying both risk factors attached to this drug consumption pattern and protection factors that may reduce NPS abuse amongst young people in Romania.

2. The goals of this study

This study had as a **general goal** assessing knowledge, attitudes and practices regarding the consumption and abuse of NPS sold as „legal highs” in 10 major cities of Romania, in view of developing harm reduction programs tailored to children and young people aged between 10 and 24 years.

Specific goals:

- Documenting NPS consumption in communities.
- Defining a „legal highs” user profile and identifying patterns of „legal highs” consumption.
- Identifying risk and protection factors regarding NPS consumption and abuse.
- Elaborating recommendations for developing evidence-based harm reduction programs.

3. Research methods and techniques

The present study represents pioneering work in a field with scarce scientific data, which led us to use a variety of methods and data sources so as to generate valid results.

The results were interpreted by taking into account all data sources used during field research, as well as during secondary data analysis.

To get a clear picture of the phenomenon and NPS properties, we used content analysis techniques of printed and online sources. Afterwards, aspects like prevalence of consumption, frequency, attitudes, practices and user profiles were documented with data obtained through interviews with representatives of local authorities, NGOs members and NPS marketers, as well as questionnaires for NPS users. By means of data triangulation we reached relevant conclusions that can ground further recommendations for specific intervention programs.

Methods and techniques used

- **Content analysis** of various sources: reports, studies, online sources analysis – social networks, forums, and media. Our study targeted websites, search engines, forums and social networks with NPS relevant data addressed to the population in Romania (regardless if these were Romanian or foreign online entities).
- **Sociological surveys** (questionnaires for NPS users and marketers).
- **Semi-structured interviews** or expert focus groups.

The study took place in 10 major cities of Romania, selected by population and relevance within the 8 Euro-regions: **Bucharest, Constanța, Timișoara, Cluj, Iași, Ploiești, Galați, Craiova, Brașov and Oradea.**

Target group

We focused our study on NPS users that are children and young people aged 10 to 24.

Data collection interval

We collected our data between 15 January 2011 and 30 April 2011.

Results

The risks attached to legal or illegal psychoactive substances consumption cover a complex aetiology. In order to provide a synthetic analysis framework, they were categorized according to a conceptual model¹.

Based on this theoretical framework, we used **6 key variables** essential to „*risk assessment*” of the NPS on the market:

- *Physical, chemical and pharmaceutical content;*
- *Abuse and addiction potential;*
- *Consumption prevalence;*
- *Health risks;*
- *Social risks;*
- *Organized crime involvement.*

Empirical/methodological limitations

The presented NPS are but a fraction of the substances on the market. They were chosen by the importance given in online searches and discussions with various respondent categories. It is noteworthy that these substances’ popularity is very frail, the hierarchy changing daily, as do the concentrations and components in the same brand.

There is no use in trying to associate certain brands with certain substances, since product names change very fast. Again, the concentration of the main active ingredient varies at an incredible degree in different samples that were analyzed.²

Interviewed experts say that the active ingredients are imported in bulk from the producing countries (China, India, etc.), and the dosage, mix and packaging are done locally. The „manufactures” lack special dosage equipment or standards for preparing the products, hence the huge variations in concentration and quality in the same brand.

¹ This framework was advanced in „*Guidelines for the risk assessment of new synthetic drugs*” (EMCDDA 2010).

² „National report on drugs. New evolutions, trends and information on European issues”, MAI – ANA, 2010.

IV. Resulting data analysis

1. Socio-demographical profile of respondents

We conducted **24 semi-structured interviews** and **6 focus-groups**, during which we analyzed the opinions of 73 professionals representing the following institutions:

- CPECA and service provider NGOs;
- treatment centres from the Ministry of Health circuit, Police, hospitals (ER, psychiatry, infectious diseases units, etc.), Ambulance, DGASPC;
- Teachers and counsellors from secondary schools and high schools;
- Workers in recreational areas where there is evidence of NPS abuse (bartenders, bodyguards, DJs, etc.).

Professionally, the respondents were as follows:

- Social workers/field operatives (23);
- Psychologists (20);
- Medical doctors (18);
- Officers (police, penitentiary) (8);
- Law practitioners (2);
- Teacher (1);
- Club manager (1).

We processed **120 valid questionnaires** completed by „legal highs” users from the above-mentioned 10 cities.

- **Gender:** Male – 80 (66.6%)
Female – 40 (33.3%)
- **Age:** Minimum – 10 years
Maximum – 24 years
Average – 18.2 years
Majority – 17 years
- **Education:** Without (3%)
Did not complete elementary school (4.2%)
Did not complete secondary school (13%)
Did not complete high school/training school (52%)
12 or more years of study (21%)
- **Occupation:** None/unemployed (25%)
Working without contract (4.2%)
Working with contract (8.3%)
Pupil (47.5%)
Student (10.8%)

Table 1. The socio-demographical profile of the „legal highs” user in the sample

The sample is mainly male (2 thirds). NPS marketers told us that three quarter of their clients are male.

Age

The average user age is 18.2 years, and the most frequent user age is 17 years. According to NSP marketers, those under 18 represent around 21% (from 2% to 70%, depending on the geographical area) out of all users. The most common age interval is 21-24 years.

Education

Users' level of education varies from no education at all to graduate students. More than half of the respondents (52%) have finished secondary school, but have not yet completed 12 years of study. 20% have not completed secondary school, and 7% have not completed elementary school.

Occupation

1 in 4 respondents do not have a steady job. Most of them are pupils (47.5%), 10.8% are students, and 12.5% are employed. One respondent is homeless (street child).

The geographical distribution of the sample is presented in Figure 2.

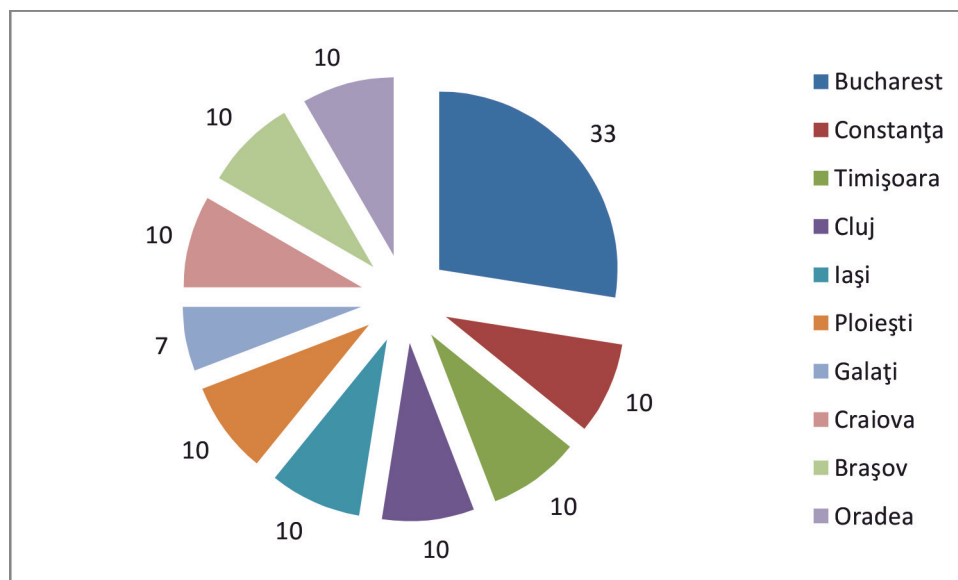


Figure 2. Users' sample geographical distribution

The main way for **selecting survey participants** was „local mapping”, with the following selection strategies:

- Online contacting the NPS shops clients (YM, Facebook, Twitter, forums and other social networks);
- Informal networks;
- CPECA workers (for contacting social service beneficiaries);
- Contacting school counsellors to interview NPS users that are pupils.

The sources for selecting NPS users for the sample were the following:

- Social networks;
- Treatment programs at CPECA;
- „Legal highs”/”ethno-botanicals” shops;

- Streets, parks and other public spaces;
- Therapeutic community;
- Syringe exchange programs;
- Clubs;
- Friends of NPS users.

2. Socio-demographical profile of NPS marketers in the „dream shops”

We completed 40 questionnaires with „dream shops” marketers from 9 major cities and Bucharest, as may be seen below.

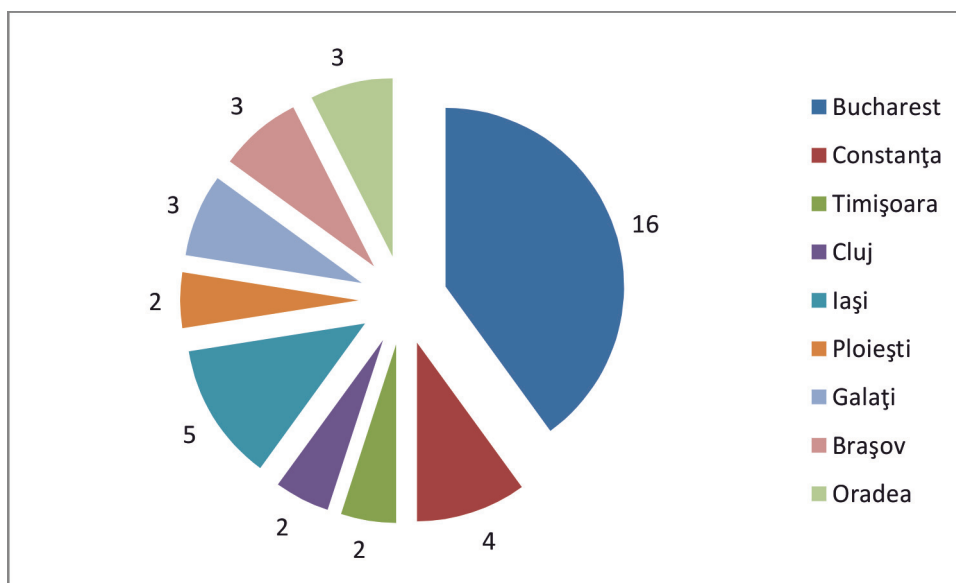


Figure 3. Marketers” sample geographical distribution

One important component in interpreting the data collected throughout the study is represented by the delineation of the above-mentioned 6 key variables: *physical, chemical and pharmaceutical content; abuse and addiction potential; consumption prevalence; health risks; social risks; organized crime involvement.*

3. NPS classification by physical, chemical and pharmaceutical components

Here we focused on the substance blends that were most wanted and most consumed by our research youth sample, as well as according to online testimonies identified in various forums that deal with this particular topic.

a. Plant and chemical blends for smoking

One of the most common NPS sold as „legal highs” are „Spice”-type products. There are a lot of products for inhaling/smoking that are sold under the „Spice” brand: *Spice*

Silver, Spice Gold, Spice Diamond, Spice Arctic Synergy, Spice Tropical Synergy, Spice Egypt, Spice Maraciuca, Ganja, M6, Diesel, Katana. The classification is hindered and rendered superfluous by the speed these names change and the dynamics of NSP supply on the market.

„*Spice*“ products are usually **plant blends for smoking** (e.g. *Turnera Afrodisia, Passiflora Incarta, Rata Graveolens*) spattered with synthetic cannabinoids.¹ Although some of these cannabinoids are outlawed, there are always appearing new chemical combinations that elude legal control.

The synthetic cannabinoids² are a large family of receptor antagonists with various chemical structures. They act upon the cannabinoid receptor generating similar effects with the main active substance in cannabis, Tetrahydrocannabinol (THC). Most of them were created in the last 40 years by pharmaceutical companies as potential analgesics, making it difficult to separate desirable psychoactive features from undesired ones.

In Europe, until the end of 2010, there have been identified nine synthetic cannabinoids belonging to three major distinct groups of chemicals (JWH, CP and HU), and a fatty acid with effects very similar to cannabinoids (oleamide)³. This diversity is a challenge for both toxicology labs, and risks assessment and developing control and harm reduction strategies.

„*Spice*“ products for smoking began to be sold internationally in 2006 (according to *Google Insights*). Although advertised as „exotic flavours“ or, in Romania, as „plants for ethno-botanical study“ and not for human use, very soon there appeared online testimonies of users pointing out the similarity of „*Spice*“ products effects to those of cannabis.

In Romania, the demand for „*Spice*“ blends began in the last 4 or 5 months of 2008, with an abrupt peak at the end of 2009, followed by a decline after the first government directive that restricted the use of 36 NPS and psychoactive plants.

Soon after, a new „*Spice*“ was out on the market, „Spice Maraciuca“ that probably contained a different synthetic cannabinoid to those outlawed. Also, the term „*Spice*“ designating a blend of psychoactive plants is previous to that of „ethno-botanicals“ which became popular a few months later.


¹ E.g. JWH-018, JWH-019, JWH-210, JWH-250, JWH-203, JWH-081, JWH-073, HU-210, CP-47,497.

² Psychonaut Web Mapping Project: Alert on new recreational drugs on the Web; building up a European-wide Web scan-monitoring System-Final Report February 2010, <http://www.psychonautproject.eu>

³ There is no data on existing EU authorization for any synthetic cannabinoids to be used as medication. There is no published data on the safe use of these substances or on the effects they may have on human subjects.

Web Search Interest: maraciuca, spice gold, spice diamond

Romania, Jan 2008 - Jan 2011

 An improvement to our geographical assignment was applied retroactively from 1/1/2011. [Learn more](#)

Totals	
maraciuca	17
spice gold	10
spice diamond	5

Interest over time

forecast News headlines



Figure 4. Level of interest in certain products

We may conclude that „*Spice*” blends are short-lived and quickly replaced by new products due not only to legal regulations, but also to the creation of an increased number of new synthetic cannabinoids with ever more complex features.

The emergence of substances for smoking is an important change on the market of so-called „*designer drugs*” or „*research chemicals*” that, until recently, were associated almost exclusively with ecstasy or amphetamines.

Another NPS category includes plants like *Kratom*⁴ or *Salvia Divinorum*,⁵ these belonging to the smoking plant blends category. They have been outlawed and current data shows that they are seldom found on the market. *Salvia Divinorum* is maybe the first substance to be called „ethno-botanical”. Online searches in Romania indicate the dawn of interest in this plant at the end of 2006 and the beginning of 2007.

b. Amphetamine type stimulants

These blends are stimulant or hallucinogenic NPS sold under various names and mixed with classic stimulants like caffeine or creatine etc. Most psychoactive compounds in these blends belong to the category of cathinones and piperazines.

According to data from the Central Drug Analysis and Profiling Lab in IGPR, between January 2009 and February 2010, these substances usually contained *mephedrone*⁶. The most popular brands were *Special Gold* and *Magic*. Other products with a similar content were „*Flower Magic Powder*”, „*Flower Magic Powder +*”, „*Charge +*”, „*Flower Power*”, „*Crush*”, „*Cristal bath*”, „*Dark +*”, „*Special Diamond*”, „*Special Original*”.

⁴ EMCDDA, *Understanding the „Spice” phenomenon*, Luxembourg: The Publications Office of the European Union, 2009.

⁵ <http://www.fortesys.ro/ethno/?q=node/19>

⁶ 4-MMC or 4-methylmethcathinone or 1-(4-methylphenyl)-2-methylaminopropan-1-one and other substances with similar chemical structure (cathinones), respectively fluoromethcathinone, ethcathinone, methoxymethcathinone, butylone or beta-keto-MBDB (butylone) = 1-(1,3-benzodioxol-5-yl)-2-(methylamino) butan-1-one, methylone beta-keto-MDMA (methylone) = 2-methylamino-1-(3,4-methylenedioxyphenyl) propan-1-one as crystals or powder.


Mephedrone

Mephedrone is usually sold as a soluble white crystalline powder and may also be injected. Sometimes it is sold as pills. The substance has no EU recognized therapeutic effects on animals or humans. It is used in no pharmaceutical product.⁷ Mephedrone and some of its derivatives are now partially absent from the „legal highs“ shops following the first government directive on NPS regulation.

Later appeared substances like MDPV – *Methylenedioxypropylvalerone* (the most popular product being *Generation 2012*) or those tryptamine-based with psychedelic effects like *5-MeO-DALT* or *N,N-diallyl-5-methoxytryptamine*. Their popularity decreased after being outlawed by another government directive.⁸

Web Search Interest: generation 2012

Romania, Jan 2008 - Jan 2011

 An improvement to our geographical assignment was applied retroactively from 1/1/2011. [Learn more](#)


Totals 
generation 2012  5



Figure 5. Level of interest in „Special Gold“

Web Search Interest: special gold

Romania, Jan 2008 - Jan 2011

 An improvement to our geographical assignment was applied retroactively from 1/1/2011. [Learn more](#)


Totals 
special gold  11



Figure 6. Level of interest in „Generation 2012“

⁷ EMCDDA, Risk assessment report of a new psychoactive substance: 4-metilmethcathinone (mephedrone); Luxembourg: The Publications Office of the European Union, 2010.

⁸ Government Directive 575/2010 (see Appendix 2).

Following the prohibition of MDPV and 5-MeO-DALT, one of the most popular legal highs in mid 2010, according to droguri101.ro forum, was „White Sensation”, advertised as „Special Gold” replacement. We have no consistent data on the active ingredient contained, but according to the above-mentioned forum, this product contains 2-(Ethylamino)-1-(4-methylphenyl)propan-1-one or 4-MEC, with a similar chemical structure and effects to mephedrone 4-MCC. We are unable to use Google Insights to assess its popularity, because „White Sensation” is also the name of one of the most famous *house* music parties, adopted by many events in Romania as well.

Another very popular stimulant blend, especially following the two government directives, is „Pure by Magic”. We have no consistent data on the active ingredient contained, although empirical assessments indicate similarities to another new product on the market, NRG1 that would contain Naphyrone (O-2482 or naphthylpyrovalerone). This is a derivative from MPDV/pyrovalerone with similar effects.

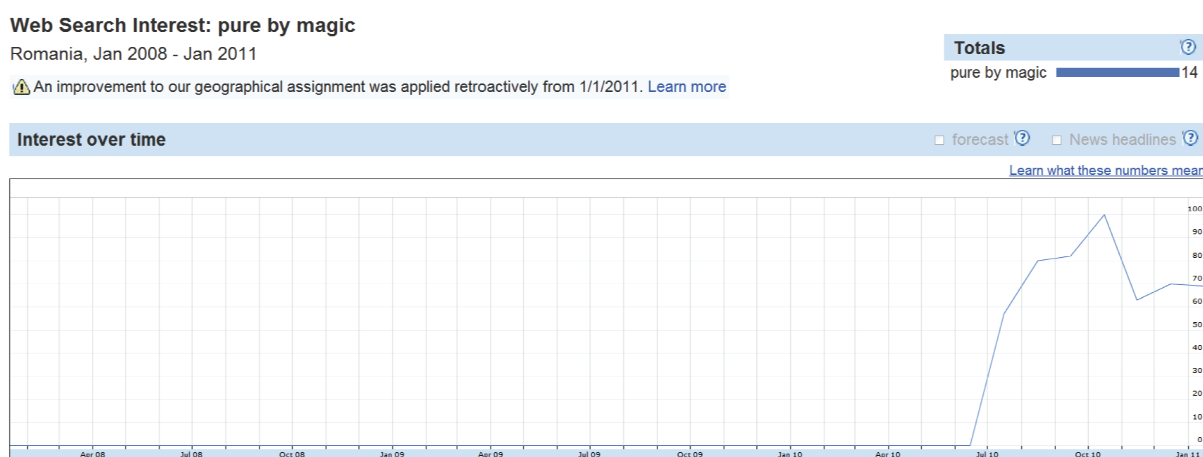


Figure 7. Level of interest in „Pure by Magic”

As we may see in figure 7, the product’s popularity grows from the second trimester of 2010, with a peak at the end of the year and a decrease similar to that of „ethno-botanicals”.

4. Abuse and addiction potential

Very few NPS sold as „legal highs” have confirmed scientific data on consumption risks because they appear and disappear very fast from the market, and are difficult to detect in biological samples through toxicology analysis.

Studies on synthetic cannabinoids are scarce and were conducted only in labs (*in vitro* and on animals), so there is no data on synthetic cannabinoids smoke inhaling effects on humans. Scientific literature mentions JWH-018 as a potential carcinogen.⁹ Moreover, accidental overdose may lead to psychiatric complications. Again, tolerance for these substances may develop very fast, having a high addictive potential compared to THC in cannabis.

⁹ EMCDDA, *Understanding the „Spice” phenomenon*, Luxembourg: The Publications Office of the European Union, 2009.

The online forum on „legal highs” at www.drugforum.ro contains testimonies on experiences with the most popular cannabinoid today, e.g.:

...smoked yesterday a power diesel and my heart starts pounding heavily sometimes you get the feeling that your chest hurts can't breathe but I wasn't at all wasted... a friend calls for ambulance they do whatever it is they do they ask me what I took, showed them the diesel power package... next day after they took blood they said I was allergic to some substance they found in my blood from that spice they tell me it's something really toxic you only find it in paints...

Another testimony describes the effects of the second *spice* as popularity: „*Katana*”.

I too smoked katana and had the same effects even worse lost consciousness for a few minutes had the feeling that everything moves in slow-motion, all my muscles contracted and my heart was throbbing and lots more as being delirious and not hearing those around me... I was PROPER paranoid got scared the first time because I didn't know what was happening but the second time was cool music, seeing things, I guarantee it was katana, it's very strong even for those smoking for years, I hope they won't be able to detect it in my blood cos my dad will hang me for this and Don't you regret anything cos you did what you wanted nobody made you do it.

Again, using unknown blends of plants and/or chemicals as psychoactive substances is a very dangerous action, considering also that in case of allergy or adverse reaction, the doctors are not able to identify the source and so alleviate the symptoms.

*Salvia Divinorum*¹⁰ has short lasting effects (a few minutes) including excessive laughter, calm, high ideation, hallucinations, panic, anxiety and eventually bad trips. Having unpredictable negative effects, consumption is occasional, cases of addiction being very seldom.

Kratom's users¹¹ describe the effects as being simultaneous – sedation, as from opiates, and at the same time stimulation, as from cocaine. Stimulant effects come from small doses, provoking alertness and mild euphoria. High doses are downers leading to dreaming. Excessive dosage leads to powerful migraines.

Amphetamine type stimulants are similar in effects to amphetamines, methamphetamines or cocaine. Most of them produce euphoria, hallucinations, sleep deprivation, lack of appetite for a period of 7 to 10 hours for a normal dose, and a longer period for more doses, after which comes prolonged lethargy.

The treatment in case of overdose or complications acquired through NPS consumption is given more in ER, than in ambulatory care. When an ambulatory treatment is possible, medication is specific for the client – there is no generic treatment that may be used on a larger number of patients.

An important aspect here, stressed by experts, is that methadone or opiate substitution medication does not interact with NPS consumption.

43.9% of consistent „legal highs” users in our sample declared as main drug for consumption those products belonging to amphetamine type stimulants category.

¹⁰ According to www.erowid.org

¹¹ According to www.erowid.org

As to mephedrone consumption, there is no published research on medical, psychological and behavioural risks in humans. Nor is there any research conducted on animals in this area that would otherwise help extrapolate certain features and evolutions.

The only exploratory studies are based on personal communications from users and clinical data from hospitals that receive overdose patients.

Users mention as the desired effects for mephedrone consumption: euphoria, general arousal, increased sharpness in senses and thinking, low hostility, mild sexual arousal. Many users assert that this drug's effects are manifest over longer periods of time and with increased intensity as compared to those following cocaine consumption.

Adverse effects include perspiration, headaches, tachycardia, spasms, nausea, chest pains, bruxism, agitation, paranoia.

Mephedrone is administered mainly by sniffing, followed by swallowing if dissolved in various liquids. One of the important things that set apart mephedrone from other NPS is that it may be injected.

Mephedrone craving is very intense, users stating that sometimes it is more powerful than craving other drugs, like heroin, but there is no clinical data to support this. However, the drug abstinence syndrome is not accounted for as being characteristic of this substance. After a certain consumption period, side-effects include nose congestion from oversniffing and fatigue from sleep deprivation during consumption. Heavy users may encounter abstinence symptoms similar to those that appear following cutting off other stimulant drugs.¹²

The following is a testimony, picked from www.drugforum.ro, on experiences following mephedrone consumption:

Mephedrone creates a STRONG psychical addiction. First time PMI took a 0.25 special / 4 IV (yeah... PMI started directly IV-wise) and when the effect was gone (an incredible and overwhelming effect) PMI went straight to the spice shop to pawn his iPod (the iPod got lost eventually, but that happened later, meantime it was pawned again for a few dozen times). You do not kid around with that stuff. Believe me... your brain has lil' to no experience of such a state of euphoria, of progressive happiness, of exponential satisfaction. Most likely you won't be able to cope with it.

Effects, as they are described on this forum, include:

- Obsessive-compulsive fascination („everything, and I mean everything, is interesting – of course you cannot accomplish nothing because EVERYTHING is too damn interesting”);
- Sexual hyper-arousal;
- Unbelievable empathy;
- Low levels of concentration and uncontrollable sincerity („pay attention to whom and what you are saying as you are tempted to disclose almost anything owing to – or because of – empathy”);
- Logorrhoea;
- Tachycardia („pulse goes around 130 bpm – mine was 170-180 bpm, but anyway my normal pulse is 90-95 bpm”);

¹² EMCDDA, Risk assessment report of a new psychoactive substance: 4-metilmethcathinone (mephedrone); Luxembourg: The Publications Office of the European Union, 2010.

- Tachypsychia („incredible thought speed – I cannot guarantee about their consistence, but you believe that you understand the secrets of the universe and nobody can make you think otherwise”);
- Appetite loss („obviously”);
- Sleep deprivation (melatonin patterns are disrupted).

The comedown includes:

- Depression;
- Panic attacks;
- Sleep deprivation/insomnia;
- Lack of energy.

As we may note, mephedrone effects are similar to other stimulant substances.

Other amphetamine type stimulants

Regarding new products that are just emerging on the market, the literature in the area is extremely scarce, the main sources of information being users’ testimonies.

We attempt below to describe a few of these new blends (we will use the commercial name of the substances).

Generation 2012

On www.erowid.org we find the following data on MDPV – the active ingredient in *Generation 2012*:

Main effects. MDPV is usually compared to amphetamines or other stimulants. Users’ testimonies include often an abrupt comedown that may lead to compulsive need to reuse.

Acute effects of MDPV:

- Tachycardia;
- Hypertension;
- Vasoconstriction;
- Perspiration.

Mentally, there is increased alertness, the desire to stay awake and sexual arousal. Effects last 3 to 4 hours, but the blood pressure, tachycardia and sexual arousal last up to 6 or 8 hours. Large dosage may lead to panic attacks or irritability. There are anecdotic reports on psychosis following acute abstinence symptoms. Considering its effects, MDPV was compared to methamphetamines.

Regarding *White Sensation* and *Pure by Magic*, the newest stimulant blends on the market, there is no consistent expert opinion on the active principle. We are thus confined to work with the online users’ testimonies referring to the commercial denominations of the two products.

Pure by Magic

This is the most commented on product by all respondents in our study. 27 of the respondents (approximately a quarter from total) declare they intensively consumed this product in the last 30 days. Most of them are from Bucharest (25, of which 24 are injecting *Pure*).

On most forums we monitored there is quasi-agreement as to the naphyrone's (a new cathinone) role of active ingredient in this product. According to data obtained through the EMCDDA's Early Warning System stating that naphyrone is one of the most widespread „legal highs“ in EU countries, the probability that this is the same active ingredient in *Pure by Magic* is quite high, although we have no expert lab corroboration.

On www.droguri101.ro we found the following comments on *Pure by Magic*:

...of the Magic products... pure by magic – in my opinion this f***** up your views on reality so bad, you are who you want to be, with whom you want, you are there and enjoying it intensely. Your wife is whom you want her to be and a few good hours you're happy. On top of this you have some wicked trips... for example I made up another YM id that I believed to be a she... and I begun to hit on her and not only I succeeded but she called me to go to her. Remember it was still me on the other id talking to myself but I was convinced I had nothing to do with it. After, you won't sleep for 6-7 hours and only eat after more than 10 hours.

On www.drugforum.ro we found more comprehensive comments on the product:

To get on topic, tonight he did it again and bought some Pure by Magic. Sniffed a line, after 2 hours another. It starts after 10-15 minutes, so patience is a virtue before „I Don't feel a thing“ stuff.

Things are quite smooth, that's it so far:

Plus

- No strong high, you can function pretty okay and of course if you want to, it does not „overwhelm“ you
- Lots of energy
- Overall wellbeing, forgetting stress and lil' lizard problems
- You get alert, more aware of the surroundings, but in the same time you can focus very well on just one thing if you want to
- You can concentrate at a decent level
- The heart is in a bit of a hurry, some tingling in some body areas, nothing unpleasant, a lil' bit more prone to numbness
- Comedown after the first line was really ok

Minus

- Slight handshaking (almost imperceptible)
- A lil' perspiration on the paws
- Some forgetfulness (wait, what the... was I doing?) and memory lapses
- That's about all, he will come back „after“ and later on with an update if something unpleasant occurs

The last night when my tomcat laid his nose on the desk was Thursday to Friday. Before we continue with the effects, I kind of have to confess that my tomcat sniffs on a daily basis from the first post in which he mentioned the „daily basis“ that is Thursday night.

We may note that the physical and psychical effects are similar to those following the consumption of other stimulants we described earlier: panic, addiction, weakening, agitation/tachycardia, stomach ache and heartache, fatigue, lethargy, lower concentration levels.

An interesting issue may be noted in the following exchange:

...the effects differ from person to person... you have to know how to take advantage of them... and to humour them... if you want to get the full enjoyment... I tried them all in countless occasions... and I can say that Pure by Magic... is the

only one that's worth paying for... from the legal stuff... and btw... they say the comedown sucks... it sucks if you Don't know how to control it.

Some are under the impression that Pure is something you can control. You can't control something that you have never experienced before and those who blabber that „they control the drug and not the other way around“ are just some junkies scared of tomorrow...

Hence we may conclude upon the existence of a risk factor that depends on the user's personality and which is probably very common amongst youth experimenting new substances. It is about overestimating the power to control altered mind states induced by psychoactive substances consumption. As we have seen from the above-presented testimonies concerning „legal highs“, addiction sets in very fast and the need for another dose appears shortly after the previous one.

White Sensation

This product's users state on www.droguri101.ro the following:

I have tried a 0.50 package and it's very good it kept me at the top for 35 hours. Side-effects are the same barfing feeling crappy but they started after it was over I didn't sleep for 56 hours didn't know what to do... if you try it le'me tell you this Don't do it alone better share it with somebody to have a blast... anyway it's super:))

...I took it, it's good as in letting you eat and sleep after comedown, but it's much milder than mmc, similar effects but milder, used to snort a line from a 0.25 package and it was top, but still I was sniffing each 30 minutes.

On www.drugforum.ro we have found other opinions:

It's worth it, from 0.25 you get very close to what used to happen before with mephedrone. A lil' anxiety, but nothing serious. On the other hand, the nostril really stings and the veins there burst quickly. Generally, a pleasant and euphoric high that keeps on for about 2 or 3 hours. You can get some sleep from a 0.50 g. PMI gave up from buying it because it was too expensive. There is some comedown: apathy, feel like nothing, but nothing heavy.

PMI got fed up with Pure and always Pure and wants some advice... PMI would like to know about White S., what is the difference compared to Pure?... for PMI it's a lil' too expensive, that's why he wouldn't take it without asking first... is it true that White S. is the coolest there is now available? Thanx.

RE: if you are a pure fan (and you like that) you might get disappointed by this, and you'll need a lot more (I would say that 0.25 g of pure is about 2 g of this).

We may note that the opinions differ, but most users agree that the product is similar to mephedrone, though milder. Variations in effects may depend on tolerance, physical constitution, previous experiences with similar substances and the existence of different concentrations sold under the same brand. One particular feature of this product is its corrosive quality that disrupts nose membrane and blood vessels in the area.

5. The prevalence of NPS (sold as „legal highs“) consumption – knowledge, attitudes and practices associated with consumption

For this section of the study we used data collected in our field survey: heavy NPS users and markets“ testimonies were analysed, as well as expert opinions from the 8 Euro-regions of Romania.

The pattern of choices in our sample cannot be generalized for the whole spectrum of NPS users, the analysis of the data we collected having a rather investigative approach. In our study we could not use a representative sample, because there is no clear representation of the population consuming such substances and the distribution of choices may be influenced by many factors like respondents“ selection areas, the insufficient number of cases analysed, etc. Nonetheless, we tried to increase the adequacy of the representation by using a nationwide sample (subjects from the major cities in all 8 Euro-regions of Romania).

a. *Behaviour patterns in heavy NPS („legal highs“) users*

Interviewed experts helped us discern the following profile of „legal highs“ users:

- Age varies very much (from 11 to 40 years). There is a significant consumption in children up to 15 years;
- Consumption does not necessarily take place in hiding;
- Users are mainly socially integrated people, middle class youth;
- Low access to services (communicating with „legal highs“ users through the usual channels adopted by drug user services falls short, many of them being unaware of the existence of harm reduction services).

This category of users tends to experiment with different combinations of substances and this could be a consequence of the lack of regulations regarding the ways of selling such substances.

b. *The prevalence of NPS consumption in the last 30 days depending on the blend preferred by heavy users*

Based on the data we collected in our field survey from people that **regularly use „legal highs“**, we were able to draw on the following conclusions: from what NPS blends were mentioned as being consumed in the last 30 days by the users in our sample, we selected 7 most preferred brands (the rest of the blends were mentioned only once or twice).

Diesel	31
Pure	27
Katana	11
Magic	7
Charge	6
Bonsai	5
M6	4

Table 2. Mentioned brands

We tried to find out, by monitoring secondary sources of information, the type of active ingredient in these blends and came up with two categories of substances: *Spice* products and amphetamine type stimulants. Specifically, *Diesel*, *Katana*, *Bonsai* and *M6* are *Spice* products and were mentioned 51 times in total, while *Pure*, *Magic Crystal* and *Charge* are amphetamine type stimulants and were mentioned 40 times.

The conclusion might be that within heavy users of „legal highs“ (using at least 4 times in the last month), 56.1% prefer *Spice* products, while 43.9% like amphetamine type stimulants. We may notice a relative balance between the two trends.

Another way of discerning the most consumed „legal highs“ was asking the respondents to build a top of the preferred brand in the community. These results are not very different from the previous ones. The first five places are almost identical.

Pure	33
Diesel	30
Katana	15
Magic	10
Charge	9
Haschish (legal) – Chocolate	4
Infusion/Boom	3

Table 3. Preferred brands

A further classification is based on the answers we got from NPS („legal highs“) marketers, as presented below:

Pure	9
Katana	7
Diesel	5
Magic	4
Boom	3

Table 4. Most popular brands

By using the triangulation method and confirming these various feedback sources, we may assert that **Diesel**, **Pure** and **Katana** are the most popular brands nationwide.

c. Consumption frequency

On this topic, our survey's results are as follows:

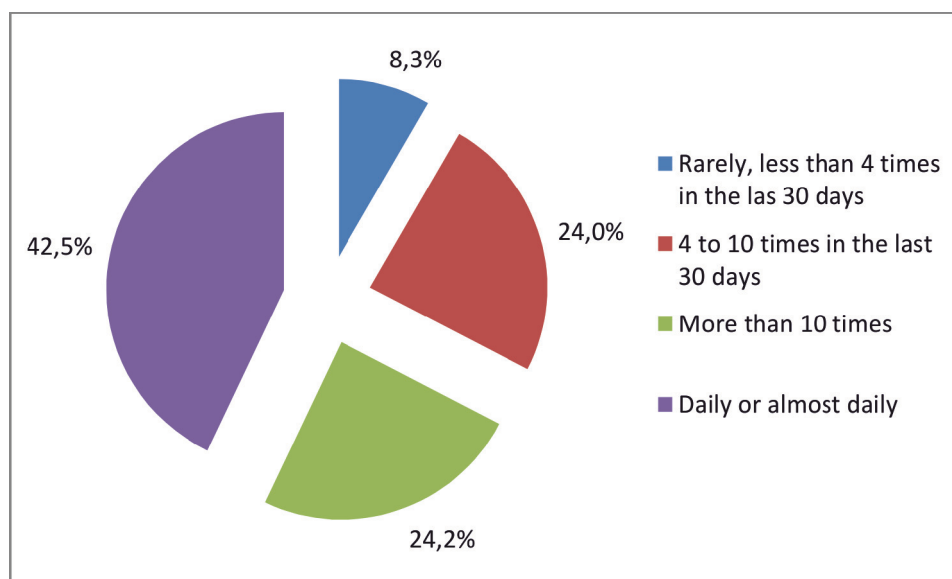


Figure 8. The frequency of the preferred NPS brand consumption

We found out that 42.5% of the respondents consume NPS on a daily basis, 24.2% consume them more than once in three days, 25% consumed them between 4 and 10 times in the last 30 days, and 8.3% consumed NPS less than 4 times in the last month.

d. Multi-consumption

55.9% of the respondents declared that they consumed more brands in the last month. At least 1 in 10 respondents declare they frequently consume illegal drugs besides NPS. Some of the respondents say that they mix NPS and alcohol (16), with illegal drugs (3), with alcohol and other NPS (2), with alcohol and illegal drugs (1). Besides alcohol, along with NPS, the respondents also consume heroin, amphetamines, cocaine, diazepam, valium, rofedex, cannabis, glues, tusin.

e. Consumption history

The declared history of NPS consumption for the preferred brand varies between 1 and 31 months with an average of 13 months, the most frequent answer being 24 months, respectively 2 years. These answers are consistent with the increase of interest in NPS as seen in secondary sources of information (Google searches).

f. Administration methods

The most used methods are smoking, injecting and sniffing.¹³ The distribution of users in percents is presented below:

¹³ The answers on amphetamine type stimulants come mainly from Bucharest from injecting drug users. However, it is not possible to extrapolate at a national level the conclusion that amphetamine type stimulants are mainly consumed by injection.

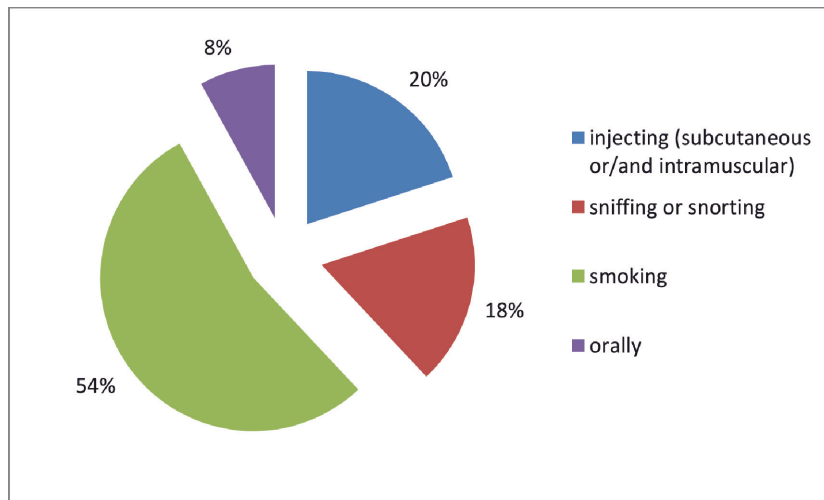


Figure 9. Administration method (%)

g. *NPS quantities consumed* daily by the respondents in our sample vary between 0.25 g and 5 g, with an average of 0.8 g. Not all answers referred to „grams“. Quantified in cigarettes, the daily quantity varies between 1 and 10, with an average of 3.8 cigarettes/day.

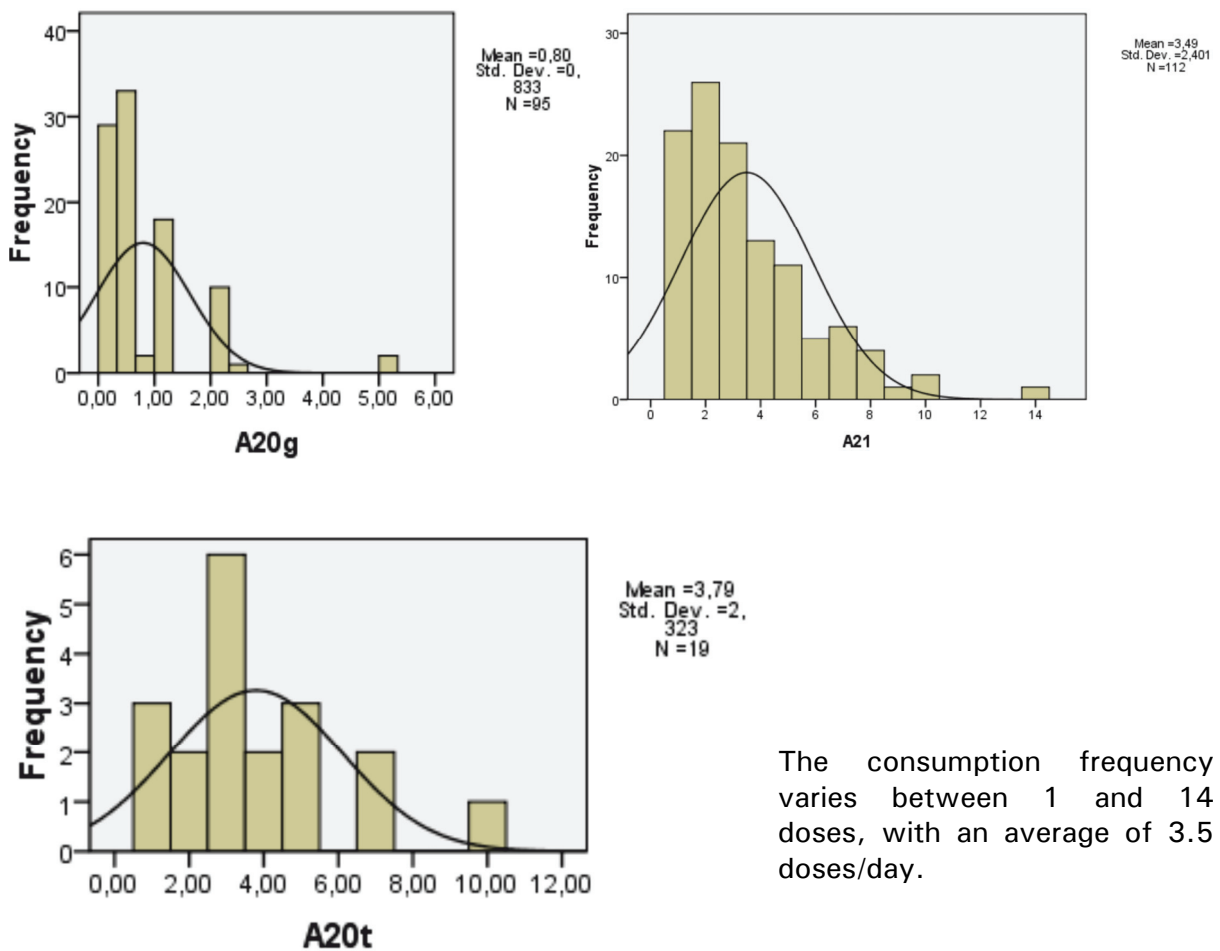


Figure 10. Consumption frequency

h. Consumption frequency

The most frequent answers are the following (multiple choice answers):

- „Whenever I have money” (37);
- „When I meet my friends” (34) – group influence;
- „Occasionally, at parties” (20) – group influence;
- „Out, in weekend” (23);
- „Daily” (32).

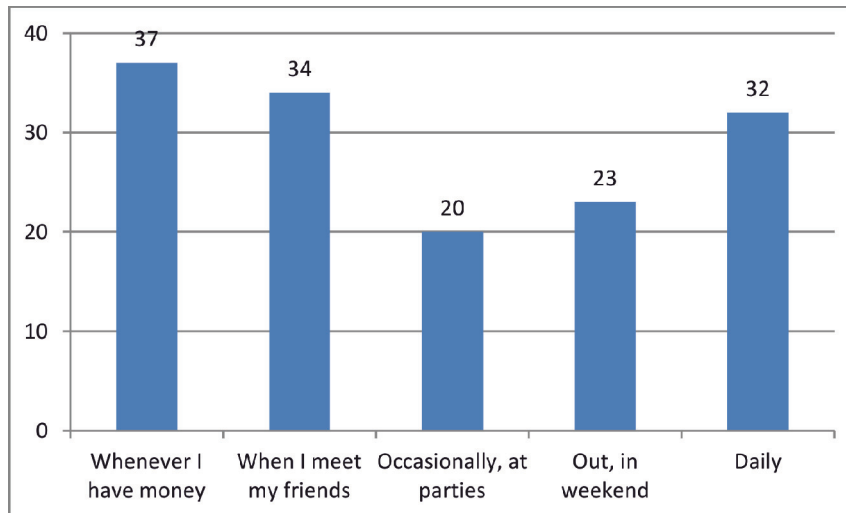


Figure 11. Consumption frequency

The marketers were also questioned regarding the periods when they sell most. The answers are as follows:

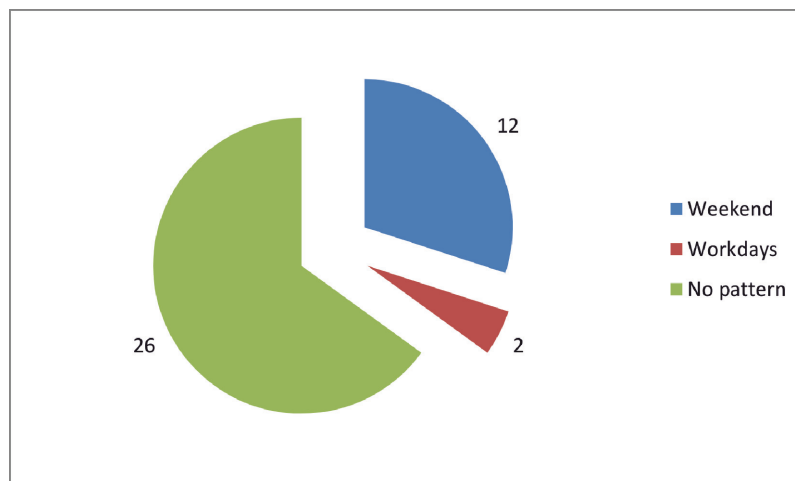


Figure 12. Consumption distribution by period

As one may notice, there is no pattern of consumption in this regard, although weekends are mentioned more than workdays. „Legal highs” consumption may begin as „recreational consumption”, developing sometimes in chronic and daily consumption.

The busiest hours for selling vary a lot, but most sellers mention the 8-12 PM or just „at night“. The second busy time interval is „after 3 PM“.

The preferred place for consumption was also a multiple choice topic. The most preferred places are:

- „On the streets“ (56);
- „At home“ (48);
- „In clubs/pubs“ (41);
- „At school“ (4)
- „Somewhere else“, usually at a friends“ place (17).

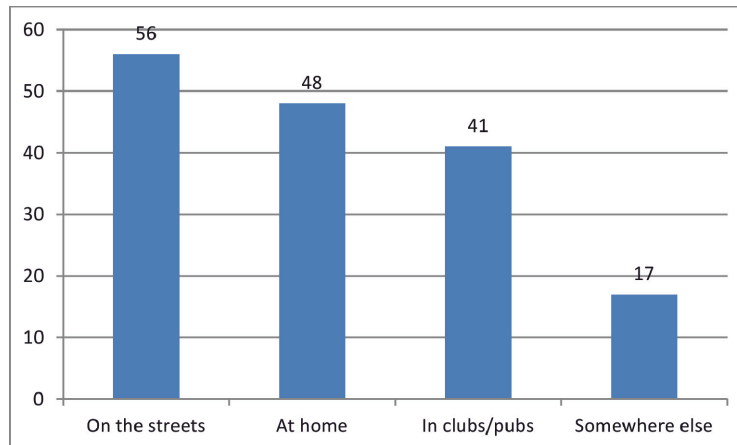


Figure 13. Preferred place for consumption

i. Group consumption

85 respondents declare they prefer consuming NPS with friends, while 10 say they like to consume alone and only 7 with partner.

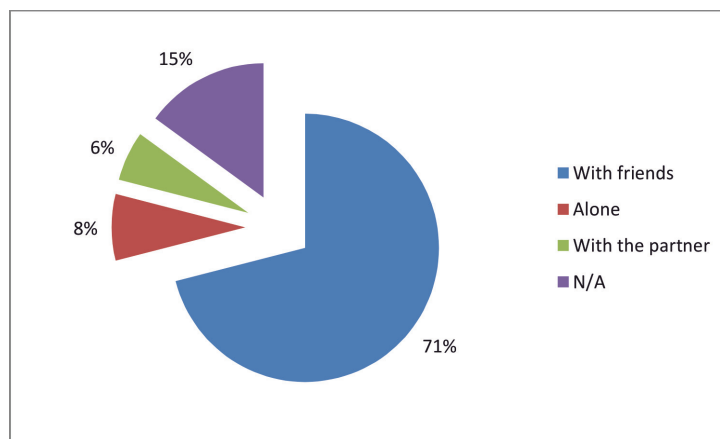


Figure 15. Preferred companions of NPS consumption

j. Demand for treatment

More than a quarter of the sample (28) declared they accessed medical services following NPS consumption. Most of them (23) needed emergency services, some accessed rehabilitation services (4), while others needed psychiatry services (4) or psychological counselling (4).

Service type	Number of users
ER	21
Psychological counselling	2
Rehabilitation	1
ER/psychiatry	1
ER/rehabilitation/psychiatry/counselling	1
Rehabilitation/psychiatry	1
Rehabilitation/psychiatry/counselling	1

Table 5. Accessed services

k. Triggers/motives for consumption

The explanations regarding the aetiology of consumption are diverse and complex. Here are some of the explanations given by interviewed experts:

- **Showing off** *„That’s the way they’re having fun, it’s a way to demonstrate they belong to the group, otherwise they become excluded. From a behavioural point of view, this age-specific showing off or stubbornness increases following NPS consumption, sometimes with tragic outcomes.“*
- **Group influence** *„I have found that there is a group-determined consumption, cases of group blackmail, if you Don’t consume you are not a true friend. Consumption starts from the fear of being excluded from the group. As for having access to NPS – this is very easy, the only problem is that of money, but they save the money given by their parents and when they have the necessary amount, they are able to buy NPS.“*
- **Coping strategy** *„External stress, family money problems, frustrations – and they can fall into such problems... Many of them do it saying that „I feel better“, just to cope with frustrations, to forget the hardships.“*

l. Buying sources and „legal highs” prices for users

There are various **sources**. 75 of the respondents declare that they usually buy NPS from „spice shop/weed shop etc.”, 53 get them from friends, 33 buy online or order at home, 28 get them from dealers, 11 get them from people who advertise on the Internet.



Figure 15. NPS buying sources

m. *The quality of the products* gets different appreciations from users:

- „Good” (32);
- „Average” (30);
- „Variable” (28);
- „Poor and very poor” (30).

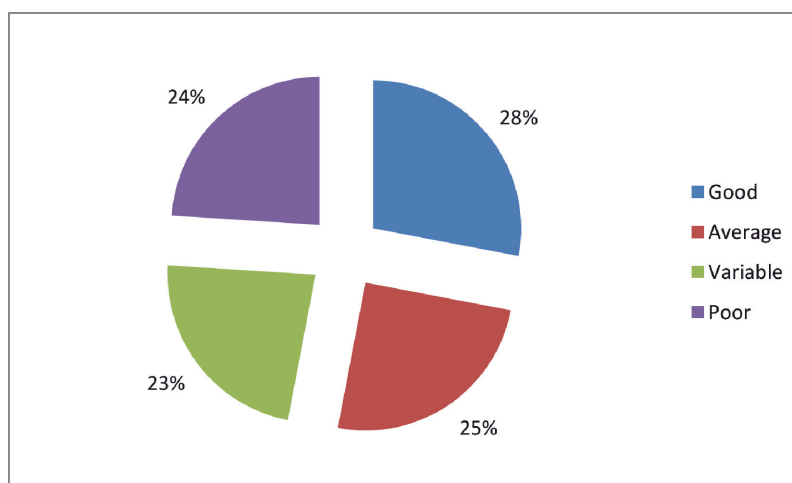


Figure 16. The quality of „legal highs” as perceived by users

In our field survey, the marketers were asked about the percentages of online commerce. 24 of them answered on this topic and 11 of those declared they do not sell online. The online selling rates of the remaining 13 marketers have an average of 48.71%. The average number of customers on a typical day is around 45 (minimum 10, maximum 200).

n. *The buying source for NPS marketers or people who sell them to the public*

The main opinion from an online forum on „legal highs”¹⁴ is that these substances come from China. The Chinese factories are continually adapting to the demand, having always new products to be sold when legislation enforces control over old ones.

Pretending to be a potential client, Sky News correspondent, Holly Williams contacted such a company in Shanghai and got confirmation from a worker that the factory produces mephedrone and methylene in batches – 100 kilograms, 200 kilograms, 50 kilograms, whatever quantity the customer wants.

The worker went on to reveal that there are already five British customers, two of which are big ones.

He said that „One of them orders 50 to 100 kilograms a week. The other one orders 50 kilograms of mephedrone a month, and 40 kilograms of methylene.”

Asked whether a ban on mephedrone in Great Britain would cause problems for the factory, the worker said the company was already well prepared. „We’re working on five or six new legal products. Most of advice and ideas come from our British customers.”

Toxicologist Dr John Ramsey declared for Sky: „We will soon see 10 or 11 new substances coming out every year.”

(www.droguri101.ro)

¹⁴ www.droguri101.ro

Also on this forum, referring to the prices of bulk substances, a user states:

I worked in this area when legal highs were at their peak and I can tell you that 1 kg of substance (yes, 1 000 g) has an average price of 1 000\$ (yes, dollars, not euro) at the factory in China... You do the math! :)

Working on this assumption, we identified a website¹⁵ with (mainly Chinese) producers who are bulk selling already „classical” NPS and many others that are not yet outlawed: „AM-2201(1-(5-fluoropentyl)-3-(1-naphthoyl)indole) CAS:335161-24-5 Assay: 99% min JWH-018, JWH-019, JWH-073, JWH-250, JWH-081, JWH-210, JWH-200, JWH-122, JWH-203, 5-MeODALT, 5-IAI, methylone, flephedrone, naphyrone, MDPV, MDAI, WIN48, 4-MEC, 4-FA, RCS-4, AM694, AM2201, DMAA, PFPP”.

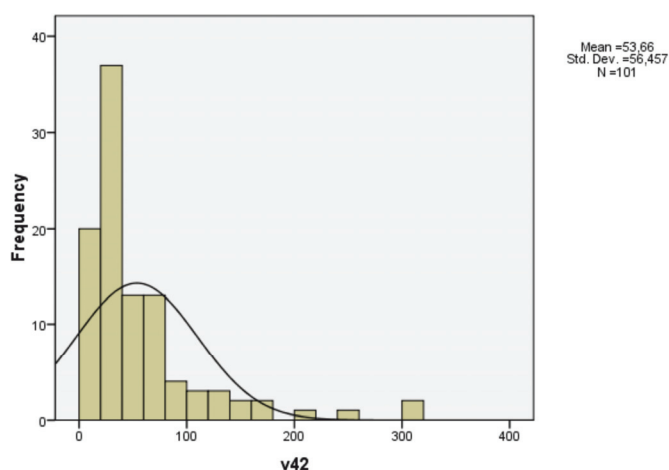
o. The price of „legal highs” in Romania

The prices of NPS were ranging at the time of the online assessment from 10 RON/g to 60 RON/g for *Spice* products (plant blends) and from 35 RON/g to 300 RON/g for powder/crystal products.

According to young NPS users, the money spent by regular users ranges from 10 to 300 RON/day. The average is 53 RON/day.

A price range is difficult to assert from the declarations of marketers. The most common answer is 20-50 RON/0.25 g package, but it can go as high as 100 RON.

The marketers’ answer at the question regarding the average sum spent by customers for one order ranges from 13 to 250 RON/order. The average is 50.56 RON, very close to what users declared to be necessary for daily consumption.



6. Personal and public health risks

The products sold as „legal highs” are obtained from pharmacological and chemical substances and blends made in unauthorized factories. Therefore, information is scarce regarding content and effects on human subjects. Moreover, in Romania there is no data on the reactions that these substances may give when consumed along with alcohol, prescription medication or illegal drugs.

An analysis published in the „2010 National report on drugs”¹⁶ shows 235 non-fatal emergency cases (acute intoxications from „legal highs”) nationwide (56 medical units in 41 counties) in the first 6 months of 2010, plus 205 cases in which the substances

¹⁵ <http://www.lookchem.com/cas-335/335161-24-5.html>

¹⁶ „2010 national report on drugs”, ANA, 2010, http://igpr.ro/agentia_nationala_antidrog.htm

that produced the intoxication were unknown. There is no data on the type of intoxicating substances, since emergency units have very poor forensic labs.

Interviewed experts underlined the fact that there is a high epidemiologic risk of increase in „legal highs” consumption, since users have a high level of competence in using the new media (forums, blogs, chat, etc.) where they can share experiences and order „at home” substances promoted by online advertising.

Data from the Forensic Medical Institute and from the Central Drug Forensics and Profiling Laboratory from IGPR shows that many categories of amphetamine type stimulants (mephedrone, MDPV, etc.) sold in „weed shops” were detected in syringes used by known heroin users. So, a risk factor that emerges from this is the injecting of NPS, method that can lead in a short amount of time to an increase of blood-borne diseases, as is the case with other injecting drugs.

At the same time, as data shows, there is the possibility that veteran injecting drug users (especially with heroin) could die as a result of mixing new and old drugs. Interviewed experts mentioned cases of deceased injecting drug users as a consequence of switching from heroin to „legal highs”. The cases were not confirmed by the Forensic Medical Institute¹⁷. Still, experts from FMI state that detecting the new substances in biological samples is a particularly difficult task considering that they are very recent and so there is a lack of technical detection means, and, moreover, the speed at which they are absorbed by the human body.

An expert we interviewed declared that „Heroin users switch to NPS because this eliminates the threat of being arrested for high-risk drugs possession”.

Risk behaviour of respondents that are injecting NPS

These risks have been documented by our survey on NPS users. As the number of respondents on this topic is reduced, we will not use percentages.

From the 31 NPS users that declared the fact that they inject:

- 30 are from Bucharest and 1 from Ploiești;
- 24 prefer „Pure”, 1 consumes „Pure” mixed with heroin, 5 prefer „Magic”, and 1 injects „3DVision”;
- Almost 1 in 3 declare they are unaware of the health risks attached to injecting drugs;
- 8 out of 10 declared that they have used needles or syringes for injecting NPS or other drugs in common with others, one quarter being users that inject frequently.

Half of the NPS injecting users declare they use condoms occasionally, 2 out of 5 users declare they do not use them at all, 1 in 6 respondents says that they had no sexual intercourse in the last 12 months, and 2 in 3 injecting users declare they have had sexual intercourse with more than one partner in the last 12 months.

As we may see below, 1 in 3 NPS injecting users were not tested for HIV, HBV or HVC in the last 12 months. 10 respondents (a third of the total) declared they needed medical attention following „legal highs” consumption.

¹⁷ „2010 national report on drugs”, ANA, 2010, http://igpr.ro/agentia_nationala_antidrog.htm

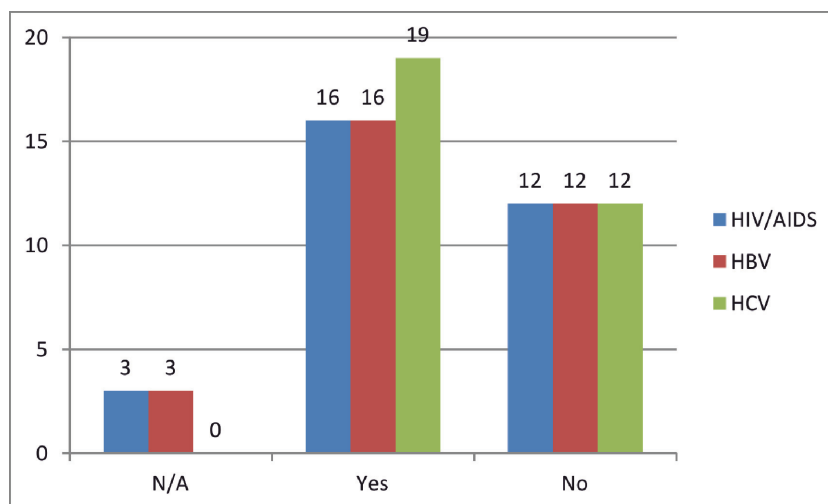


Figure 17. NPS injecting users tested for infectious diseases in the last 12 months

Regarding the self-declared status concerning HIV, HBV and HVC, more than a third of users are HVC positive, 3 are HBV positive and 1 is HIV positive.

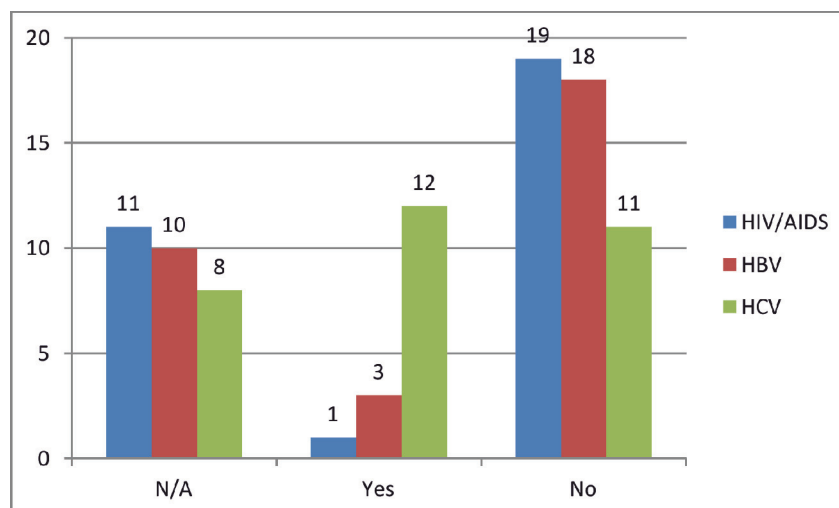


Figure 18. Self-declared HIV, HVB and HVC status

Almost half of the NPS injecting users declare they have suffered **complications (acute infection, gangrene) following NPS injecting.**

In order to accurately delineate the health risks assumed by „legal highs” users, we present below a classification of the individual risks most frequently associated with NPS consumption. Interviewed experts helped us structure the psychological and medical effects:

a) *Psychological effects:*

- Memory loss, concentration problems, psychomotor disorders, logoneurosis (stutter);
- Psychopathological disorders (paranoia, increased depression, hallucinations);
- Breaking away from reality;
- Increase suicide attempts and aggressiveness;
- Behavioural changes;
- Panic attacks;

- Low self-esteem;
- Sleep pattern disorders with side-effects on cognitive functions;
- Psychical addiction;

b) *Physical effects:*

- Dehydration;
- Cardiac disorders (e.g. mitral valve vegetation that is conducive to cardiac arrest);
- Golden staph infection in heavy use (15 times a day);
- Pulse disorders;
- Cardio-respiratory arrest;
- Heavy perspiration;
- Low immunity (e.g. increase of abscesses, especially in heavy use);
- Very defective personal hygiene;
- Symptoms aggravation by multiuse;
- A decrease of success in the opiate substitution treatment with methadone and an increase in risk behaviour;
- Gastritis;
- Respiratory disorders;
- Nausea, headaches, dizziness.

Details on individual risks

Addiction: in focus-group and individual interviews there was mentioned the psychical addiction of heroin users that switched to „legal highs“. Also, addiction sets in very fast for those who begin drug consumption with NPS. In a very short amount of time the tolerance to drugs increases, and the user needs to have evermore bigger doses, so that sometimes there is a dose every 30 minutes.

Psychosis: many users suffer paranoid fits (persecution and conspiracy delusions, the belief of being followed, etc.). In some cases, these symptoms become permanent – the user does not seem to „wake up“. But in most cases, the psychotic moment ends with effect of the drug. A recurrent delusion features „A white Dacia registered in Ilfov“ [that is following me n.a.] – image that may be found in several users’ testimonies or recurrent in the same user’s testimonies. Experts say that NPS helps a latent psychical disorder set in: *„Psychic disorders are easy to spot in the case of NPS users. If there is a predisposition towards such disorders, NPS consumption makes it happen sooner“.*

Insomnia, depression, suicide attempt: some users stay awake for 72 hours, being physically, mentally and emotionally exhausted, which in turn increases risks of depression, suicide attempts, psychosis, etc. One of the respondents mentioned an illustrative case *„I met somebody who consumed Magic and said: I’ll get on top of the building and I’m going to fly. Of course, he had to be restrained by his company“.*

Another case was mentioned: somebody who consumed heroin for 15 years switched to NPS and only after a month he attempted suicide (using 3-4 packages a day: around 0.75 mg – 1 g per day). The suicide attempt was a result of a delusion of being followed. (The user thought s/he was being followed, probably by the police.)

Aggressiveness generated by substance or psychosis. Some heroin users that switched to NPS had become more aggressive.

Hallucinations as a result of consumption, followed by short-term memory loss. The user maintains that s/he no longer remembers what has said or done while under the NPS effect.

Cardiac arrest: consequence of mitral valve vegetation.

Staphylococcus aureus: it may infect heavy users (more than 15 doses/day – injecting or sniffing).

„Fried brain“: brain shrinking and decrease of brain activity, death/burning/disappearance of neurons.

Intense panic attacks.

Users’ testimonies on adverse effects of NPS consumption

Almost three quarters of respondents from our sample declare they are aware of adverse effects when abusing NPS.

Most frequently there is mention of **short-term negative effects** (after a day of consumption):

- Insomnia;
- Nervousness;
- Dizziness;
- Headaches;
- Vomiting;
- Nausea;
- Dehydration;
- Loss of appetite;
- Stomach ache;
- Pain throughout the body/bones;
- Fatigue;
- Memory loss;
- Paranoia/delusion of being watched;
- Depression.

Negative effects after 2-5 days of consecutive consumption (**medium-term**) – in addition to the above, the users declare:

- Increased depression;
- Increased paranoia;
- Chest pain;
- Irrascibility;
- Uncontrollable fast walking;
- Decrease in weight;
- Lack of personal hygiene;
- Perspiration;
- Memory and concentration disorders;
- Panic attacks.

Negative effects after 1-6 months of daily use (**long-term effects**) include:

- Chronic panic;
- Depression, „dark thoughts of suicide“;
- Increased paranoia/hallucinations;

- Fever;
- Low immunity;
- Gastritis;
- Teeth problems;
- Serious weight loss (15 kg);
- Increased bone pain;
- Coma;
- Black-out;
- Identity loss (the user does not know who s/he is anymore);
- Muscle spasms;
- Prolonged vomiting.

37 respondents (30.8%) declare they have had **abstinence syndrome** after interrupting NPS consumption. The most mentioned product here is *Pure* (14), followed by *Diesel* (3), *Katana* (3) and *Magic* (2).

Respondents were asked how long they were deprived of sleep following NPS consumption. The time periods vary from a few hours to a few days. 71 respondents (59.1%) declared they lost weight as a consequence of NPS consumption. Again, „Pure“ is mentioned in 26 cases as the main product to cause such effects. 3 in 4 users declared dehydration. They describe the sensation as „having a dry mouth, but being unable to drink water“.

The ability of NPS marketers to offer information regarding the risks attached to „legal highs“ consumption was also evaluated. Although this attempt was considered rather strange by the respondents, we got a series of relatively consistent answers. Almost half of the marketers“ sample (19) declared they give away information on risks attached to NPS consumption. Asked to give details, the advice to users goes as follows:

- Avoid drinking alcohol at the same time because there is a risk of dehydration and/or black-out;
- How to avoid overdose: „I tell them to make two cigarettes from one dose and to smoke them 6 to 10 hours apart“; „I describe the effects to them so they will know when to stop“.

When asked about the services they recommend to chronic users, the majority of marketers responded „112 emergency service“.

If they would have to offer emergency assistance, the marketers declare that they will give away liquids with sugar and tell the client to lie down on a side „so they won“t swallow their tongue“. 11 of the respondents said they would not offer any help at all. *We may note that marketers have and are able to offer little knowledge on risks attached to NPS consumption.*

7. Social risks

Information on social risks generated by „legal highs“ consumption is scarce.

Professional activities or the education process may be disrupted by steady NPS consumption. Experts interviewed individually or in focus-groups during our field survey mostly underline the following social risk categories for the NPS consumption:

Immediate and medium-term risks

The most mentioned risk (over two thirds of the respondents) here is becoming a *drug dealer*. One of the experts commented on this:

We had clients from all social classes. So it did not matter if they came from richer or poorer families. Almost all became users or dealers. They do the latter because they can have the stuff free for personal consumption and after a while they get to advance, to create their own network. When they had to compromise, they would prostitute themselves or sell objects from home (watches, jewels). But the most serious thing was when they got to the point of prostituting themselves for a package of „ethno-botanicals“.

Criminal behaviour evolves at the same pace with the addiction. This can be attributed to higher amounts of money necessary to feed the addiction.

The degree of addiction is very important: if somebody consumes just once or twice, he may hold on to his values. But as the addiction advances, they are more willing to do anything, including crossing to the criminal side (expert comment).

On <http://forumromedic.ro>¹⁸ we find the following text posted by a NPS user:

About pure magic: the s***est powder I've ever sniffed... when you do it you have a cool sensation of talking forever you always want to do things you get 1 000 thoughts running through your head but this only for 1,5-2 hours and afterward you get low seeing thing and paranoid... for 2 hours of happiness you get 22 hours of torture. You can't sleep you just wanna get some more. First I sniffed only when I would go out but then I felt the need to do it more often **and when I had no stuff I was constantly thinking how to get money to buy some. I started to borrow money from everybody without being able to give it back** and slowly I lost my friends and nobody would mind me anymore. Don't make the same mistake as me, quit the dust while you can because otherwise you will slowly destroy your life and it's a pity...

The next categories of immediate risks include school abandonment, illicit ways to get money, prostitution, public order disturbances, and especially in weekends, driving under the influence of NPS, violence inflicted on colleagues, vandalism, pawning own and family possessions.

I can give you this one example. He begun taking money from parents' wallets, from friends' wallets, s/he sold the gold s/he found at home and everything of value at home was sold away (expert comment).

Long-term risks

The most mentioned risks here are social exclusion and auto-exclusion, career and education being affected, and also renouncing the initial moral values.

70 respondents (58.3%) that are regular NPS users accounted for problems with **family/ partner/at school/friends/in community/authorities** following „legal highs“ consumption. The most frequent are family „fights/rows“ because of consumption and the associated problems, but also running away from home or being driven away from home. In relationships, there are violent fights generated by paranoia and increased jealousy. In school, the problems range from lack of concentration and memory

¹⁸ http://forum.romedic.ro/prod/Cocaina_legala_de_la_weedshopuri_?_034416.html/36

difficulties, skipping classes, getting to be known as a troublemaker all the way to school abandonment. Concerning friends, neighbours, community, the results are usually fights and marginalization. **As to the police, users complain about violence from the authorities**, fine or even trial. More than 1 in 4 users (31) declare they have felt socially marginalized. Mostly, marginalization is brought about by friends (19), followed by family (16).

Out of the outlawed NPS, the users declare having consumed most frequently „Special Gold” – mephedrone (16). It is still not clear if the consumption was prior to or after the prohibition of this substance.

19 users state they have been in violent situations following „legal highs” consumption. Most frequently, they are involved in aggressions/fights with the consumption entourage or the partner, they are stealing or raping.

8. Data on organized crime

Some of the NPS have been regulated by new laws. In 2010, both the Appendix to Law 143/2000 on preventing and annihilating illicit drug traffic and consumption, with further modifications and additions, and to Law 339/2005 on the legal status of psychotropic and narcotic plants, substances and products, were augmented by adding new plants and substances identified as threatening public health. The legal documents on this topic are listed below:

Emergency Directive no. 6 from 10.02.2010 on modifying and augmenting Law 143/2000 listed as illicit drugs 27 substances and 9 ethno-botanical plants with hallucinogenic effects.

In 22.07.2010, *Government Directive no. 575/2010 on updating the Appendix to Law 339/2005 on the legal status of psychotropic and narcotic plants, substances and products, as well as the Appendix to Law 143/2000 on preventing and annihilating illicit drug traffic and consumption* was published. With this directive, the list published in the Emergency Directive no. 6 from 10.02.2010 was supplemented with 8 new forbidden hallucinogenic substances.

Enforcing these new regulations lead to arrests and trials on drug trafficking.

Two improvised labs were discovered, one in Bucharest and one in Cluj, where imported NPS were mixed by people without chemistry license and without any methodology.

In Romania and other European countries, illegal substances were found in blends or pills sold in „legal highs” shops, like cannabis, mCPP, MDMA or cocaine.

It seems that outlawing mephedrone set a shockwave on the market, so new substances would frequently have the same name as the most popular – now forbidden – brands: „Special Gold – new formula”, „Magic – new formula”, etc.

There is no consistent data on organized crime in selling and distributing „legal highs”, but the possibility remains that organized traffic structures appear to sell the new forbidden substances. On this topic, most experts (7 out of 10) stated that there is no such link, moreover, NPS consumption seems to have cause a decrease in the demand for illegal drugs. However, 3 out of the 10 interviewed experts think that this link exists and they accounted for situations where pupils got involved with underworld criminals in order to sell these substances.

9. Interventions

a. Intervention recommendations from experts

Most interviewed experts underlined the necessity of a common effort from the community, families and schools to lower the negative effects generated by NPS consumption. Also, there were recommendations on amending the NPS legislation by regulating new substances that are discovered to have adverse effects in case of abuse. The most frequently mentioned measures for intervention are:

- Developing new public health policies towards coordinating interventions in this area and creating quality norms for implementing such interventions;
- Drug consumption prevention and information programs on the effects on NPS, implemented nationally and locally/in communities;
- Training experts, especially psychotherapists, to work with young drug users;
- Mapping and outreach activities that would lead to developing programs adequate to real needs and situations;
- Adapting harm reduction programs to include this category of users;
- Developing medical programs that would deal with crises in NPS consumption (treatment/post-treatment);
- Creating a screening methodology to be used efficiently by school counsellors;
- Developing peer education programs;
- Developing family support services.

The experts also stated the necessity to use the Internet and social networks to support preventing and counselling campaigns, to develop a safe environment for recreational activities and the need for promoting new alternatives in this area.

Many respondents noted that there are no authorized sources of information on the effects of these substances, the consequence being that young people use the Internet as the main source, especially posts from individuals with no instruction in this area.

Also, there was noted the need to coordinate assessment efforts concerning short-, medium- and long-term effects of NPS consumption and to identify new resources for clinical research in NPS abuse.

b. Intervention recommendations from users

NPS users noted the following initiatives they consider necessary regarding drug consumption prevention and treatment:

- Developing peer education programs (82 users);
- Internet education/information programs – information, online counselling, risk/addiction self-assessment (41 users);
- Specific medical treatment (40 users);
- Psychological counselling (36 users).

Bibliography

- Auwärter, V. et al. 2009. "Spice and other herbal blends: harmless incense or cannabinoid designer drugs?". *Journal of Mass Spectrometry*, European Information System and Database on New Drugs.
- Prof. Schifano, F. et al. 2010. Alert on new recreational drugs on the Web; building-up a European-wide Web scan-monitoring System. *Psychonaut Web Mapping Project*, Final Report.
- Agenția Națională AntiDrog. 2010. Raportul național privind situația drogurilor. Reitox.
- EMCDDA. 2004. Report on the risk assessment of TMA-2 in the framework of the joint action on new synthetic drugs. *The Publications Office of the European Union*, Luxembourg.
- EMCDDA. 2009. Risk assessment of new psychoactive substances. Operating guidelines. *The Publications Office of the European Union*, Luxembourg.
- EMCDDA. 2010. Risk assessment report of a new psychoactive substance: 4-metilmethcathinone (mephedrone). *The Publications Office of the European Union*, Luxembourg.
- EMCDDA. 2011. European Information System and Database on New Drugs.

Web links

<http://en.wikipedia.org>
<http://forumromedic.ro>
<http://www.alexa.com>
<http://www.crystalenergy.ro>
<http://www.droguri101.ro>
<http://www.drugforum.ro>
<http://www.emcdda.europa.eu/publications/annual-report/2010>
<http://www.emcdda.europa.eu/publications/drug-profiles/syntheticcannabinoids>
<http://www.emcdda.europa.eu/publications/drug-profiles/syntheticcocainederivatives>
<http://www.emcdda.europa.eu/publications/drug-profiles/syntheticcathinones>
<http://www.emcdda.europa.eu/publications/drug-profiles/bzp>
<http://www.erowid.org/>
<http://www.fortesys.ro>
<http://www.google.com>
<http://www.lookchem.com/cas-335/335161-24-5.html>
<https://edndcma.emcdda.europa.eu/>
<http://www.psychonautproject.eu>
Google Adwords; <https://www.google.com>
Google Insights; <http://www.google.com/insights/search/#>
Inspectoratul General al Poliției Române (Direcția de Combatere a Criminalității Organizate, Laboratorul Central de Analiză și Profil al Drogurilor)
http://www.igpr.ro/prima_pagina/index.aspx
Institutul Național de Medicină Legală "Mina Minovici" <http://www.legmed.ro/>
http://www.igpr.ro/agentia_nationala_antidrog.htm

Appendix 1

The monthly average of online searches for „ethno-botanicals” (*etnobotanice*) in the last year

Keyword	Monthly local searches
etnobotanice [ethno-botanicals]	27 100
plantele etnobotanice [the ethno-botanical plants]	6 600
plante etnobotanice [ethno-botanical plants]	5 400
magazine etnobotanice [ethno-botanical shops]	1 600
produse etnobotanice [ethno-botanical products]	720
magazin etnobotanice [ethno-botanical shop]	720
etnobotanice legale [legal ethno-botanicals]	590
substante etnobotanice [ethno-botanical substances]	590
etnobotanice interzise [forbidden ethno-botanicals]	590
efectele plantelor etnobotanice [the effects of ethno-botanical plants]	390
vand etnobotanice [sell ethno-botanicals]	390
etnobotanice online [online ethno-botanicals]	320
ierburi etnobotanice [ethno-botanical weeds]	320
plante etnobotanice efecte [ethno-botanical plants effects]	320
etnobotanice bucuresti [ethno-botanicals Bucharest]	320
etnobotanice cluj [ethno-botanicals Cluj]	320
magazin plante etnobotanice [shop ethno-botanical plants]	260
magazine plante etnobotanice [shops ethno-botanical plants]	260
forum etnobotanice [forum ethno-botanicals]	260
etnobotanice forum [ethno-botanicals forum]	260
plante etnobotanice interzise [forbidden ethno-botanical plants]	210
lege etnobotanice[ethno-botanicals law]	210
plante etnobotanice legale [legal ethno-botanical plants]	170
etnobotanice timisoara [ethno-botanicals Timisoara]	170
vand plante etnobotanice [sell ethno-botanical plants]	140
etnobotanice en-gros [ethno-botanicals bulk]	140
etnobotanice noi [new ethno-botanicals]	140
magazine etnobotanice bucuresti [shops ethno-botanicals Bucharest]	140
substante interzise etnobotanice [forbidden substances ethno-botanicals]	91
lista plante etnobotanice [ethno-botanical plants list]	73
distribuitoare plante etnobotanice [ethno-botanical plants dealers]	58
stiri plante etnobotanice [news ethno-botanical plants]	58
plante etnobotanice online [ethno-botanical plants online]	46
plante etnobotanice cluj [ethno-botanical plants Cluj]	46
plante etnobotanice bucuresti [ethno-botanical plants Bucharest]	36
plante etnobotanice forum [ethno-botanical plants forum]	36
produse etnobotanice legale [legal ethno-botanical products]	36
plante etnobotanice timisoara [ethno-botanical plants Timisoara]	22

Appendix 2

Emergency Directive no. 6 from 10.02.2010

BZP (benzylpiperazine)	All species of Psilocybe
CPP (clorophenylpiperazine)	TFMPP (trifluoromethylphenylpiperazine)
CP 47,497 = 2-(3-hydroxycyclohexyl)-5-(2-methyloctan-2-yl)phenol	β -keto-MDMA (methylone) = 2-methylamino-1-(3,4-methylenedioxyphenyl)propan-1-one
CP 47,497-C6 = 2-(3-hydroxycyclohexyl)-5-(2-methylheptan-2-yl)phenol	β -keto-MBDB (butylone) = 1-(1,3-benzodioxol-5-yl)-2-(methylamino)butan-1-one
CP 47,497-C8 = 2-(3-hydroxycyclohexyl)-5-(2-methylnonane-2-yl)phenol	Bromo-dragonfly = 1-(8-Bromobenzodifuran-4-yl)-2-aminopropan.
CP 47,497-C9 = 2-(3-hydroxycyclohexyl)-5-(2-methyldecane-2-yl)phenol	Ibotenic Acid
DOC (2,5-dimethoxy-4-chloroamphetamine) = 1-(4-chloro-2,5-dimethoxy-phenyl)propan-2-amine	Amanita muscaria (L: Fr.) Lam.
DOI (2,5-dimethoxy-4-iodoamphetamine) = 1-(2,5-dimethoxy-4-iodophenyl)-propan-2-amine	Amanita pantherina
Fluoromethcathinone (flephedrone) = 1-(fluorophenyl)-2-(methylamino)propan-1-one	Lysergic acid amide
Indanylaminopropane	All species of Argyreia
JWH-018 = Naphthalene-1-yl-(1-pentylindol-3-yl)methanone	7-hydroxymitragynine
4-methylmethcathinone (mephedrone) = 1-(4-methylphenyl)-2-methylaminopropan-1-one	Ibogaine
4-methoxymethcathinone (methedrone) = 1-(4-methoxyphenyl)-2-(methylamino)propan-1-one	Ketamine
Oripavine	Muscimol
	Mitragynine
	Mitragyna speciosa Korth (Kratom)
	Amyl nitrite
	Nymphaea caerulea Sav.
	Turbina corymbosa (L.) Raf., Sin. Rivea corymbosa (L.)
	Hallier f.
	Salvinorin A-F
	Salvia divinorum Epling & Játiva
	Tabernanthe iboga (L.) Nutt.
	Gamma-butyrolactone (GBL) = Dihydrofuran-2(3H)-one

Government Directive no. 575/2010

Forbidden new substances:

- **JWH-250** = 2-(2-methoxyphenyl)-1-(1-pentylindol-3-yl) ethanone;
- **JWH-073** = naphthalen-1-yl-(1-butylindol-3-yl) methanone;
- **2C-C** = 4-chloro-2,5-dimethoxyphenethylamine;
- **Ethcathinone** = (RS)-2-ethylamino-1-phenyl-propan-1-one;
- **Dimethocaine (larocaine)** = (3-diethylamino-2,2-dimethylpropyl)-4-aminobenzoate;
- **Methylenedioxyprovalerone (MDPV)**;
- **Methylbenzylpiperazine (MBZP)**;
- **N,N-diallyl-5-methoxytryptamine (5-MeO-DALT)**.