Responding to new psychoactive substances in Poland

Piotr Jabłoński
Artur Malczewski
Michał Kidawa

Krajowe Centrum Przeciwdziałania Uzależnieniom

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Financed by the National Centre for the Prevention
of Addiction under EMCDDA's Grant Agreement 2023

Free copy

Authors: Piotr Jabłoński, PhD; Artur Malczewski PhD; Michał Kidawa

Translation: Paweł Nowocień

Proofreading: Joanna Szmidt

Published by the National Centre for the Prevention of Addictions
(Krajowe Centrum Przeciwdziałania Uzależnieniom)
ul. Dereniowa 52/54, 02-776 Warszawa
tel. 0048 22 641 15 01

www.kcpu.gov.pl

ISBN: 978-83-966583-2-6
Graphic design: Ireneusz Sakowski,
Pracownia Graficzna Dąbrowa

Warsaw 2023

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1. Introduction

Dear Reader,

We present you with a publication that summarizes our experiences in responding to the public health and social security-related threats posed in our country by new psychoactive substances.

In a 2014 publication by the National Bureau for Drug Prevention titled "New psychoactive substances. Scale of the phenomenon and response", we presented the situation at that time and indicated as follows: *"The problem of new psychoactive substances requires constant activity of the state and cooperation of man individuals and institutions. Knowledge of this rapidly developing phenomenon is steadily growing, which helps to better understand its nature. However, it is still necessary to develop more effective methods and mechanism anchored in Polish law to monitor the emergence of new psychoactive substances".*

Experiences and reactions to the phenomenon, developed and implemented between 2008 and 2022, show that despite mistakes made the principles and methods of combating new psychoactive substances adopted in the past (and consistently continued) have generated positive results in Poland and also impacted on activities taken internationally. This fact was noticed by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). In the publication "Preventing drugs and drug addiction in Poland" (Rychert et al., 2014), the EMCDDA notes that *Poland has also become a promoter of its own approach to the issue in question across the European Union.*

Particular emphasis should be placed on the four pillars upon which our country's preventive and prophylactic measures are based:

1. Active monitoring and research of NPS-related issues as well as efforts to respond to threats through the implementation of the evidence-based approach and good practices.

2. Broad range of public education and prevention activities involving public institutions (both central government and local governments), non-governmental organizations as well as those representing civil society.

3. Introducing changes in the legal system that take into account innovative solutions on the Polish legislative scene.

4. Direct actions taken to physically eliminate new psychoactive substances from the shops and retail outlets, with the participation of Police officers and State Sanitary Inspection.

The effectiveness of the actions undertaken in Poland through long-term and non-incidental activities based on cooperation between various stakeholders can be measures, among other things, by the findings of monitoring and epidemiological studies. The latest research reports demonstrate a downward trend in the prevalence of new psychoactive substances among at-risk youth. Data on poisonings induced by new psychoactive substances also show positive i.e. downward trends in the NPS prevalence and a significant reduction in indicators describing the effects of their use on public health.

However, new products are still emerging (although not as numerous as in the previous years when over 100 NPS were reported annually, offered and available within the European Union). Distribution channels of new drugs are also constantly changing, which is being facilitated by possibilities provided by online and social media. International report also indicate a blurring of the difference between the trade in 'classical' drugs and new psychoactive substances as well as growing interest in the supply of such substances by the criminal world. All these factors make it necessary to continue tracking and monitoring the NPS phenomenon as well as further applying and developing effective activities aimed at reducing its scale and minimising the social and health harm it causes.

Piotr Jabłoński, PhD

Director of the Centre
for the Prevention of Addictions

2. History of NPS in Poland

2.1 Beginnings of new psychoactive substances (2008-2010)

The arrival of new psychoactive substances (NPS) in 2008 in retail (primarily online stores) transformed not only the Polish but the European drug scene. In Poland, they are commonly referred to as 'dopalacze' (literally translated from Polish as *afterburners*) whereas in the Western European literature they are called 'legal highs' or 'designer drugs'. The 'afterburners' term started to be used colloquially and across the media to denote a whole range of substances or products with alleged or real psychoactive effects. However, such substances were not legally controlled. In 2010, 'afterburners' were defined in the Act on counteracting drug addiction as substitute drugs and since 2015 they have been known as new psychoactive substances. These drugs could be of natural or synthetic origin and their distinguishing feature in 2008 was the fact that they were not listed in international or national controlled substance schedules. It meant that in Poland they were not listed in schedules to the Act of 2005 on counteracting drug addiction. It is worth pointing out that at the time one name covered a wide range of substances of various effects including stimulant-like MDPV, cannabis-like UR-144 and hallucinogen-like 251-NBOMe. The 2010 amendment of the Act of 2005 on counteracting drug addiction introduced a new term to denote 'afterburners' i.e. a substitute drug.

It is worth stressing that new psychoactive substances were present on the Polish drug scene before 2008. In the beginning, occasional sale offers of psychoactive substances, which were in compliance with legal regulations at that time, appeared on Polish internet forums. In 2008, a website called 'dopalacze.com' was launched; It offered a new quality approach in terms of professional and marketing strategy. The website products were advertised as safe alternatives to illicit psychoactive substances. One advertising slogan of 'dopalacze.com' emphasised the harmless effects of its products: 'Life is too short to take unhealthy pills'. New psychoactive substances were marketed as collectibles not intended for human consumption. They were described as legal in the European Union, certified and safe. They were also marketed as the so-called 'party drugs'. The shops also stocked herbal concoctions, known for centuries in various cultures and used for a number of purposes including rituals e.g. *Salvia divinorum*. In mid-2008, following the opening of the first

high street smart shop in the city of Łódź, NPS entered the offline retail market. In no time, by the end of 2008, 40 high street smart shops were operational in the centres of major Polish cities offering an increasingly wide range of psychoactive products. While describing the beginnings of the NPS scene it is worth mentioning a first synthetic cannabinoid called JWH-180, which was identified in Poland by the Central Forensic Laboratory in February 2009. This substance gave rise to a massive supply of such-like substances on the Polish market. NPS users were surprised to find synthetic cannabinoids in herbal blends, which to a large extent, if not solely, were responsible for psychoactive effects of these blends. At the same time, other new psychoactive substances and products were arriving rapidly including mephedrone and later on a whole range of cathinone-type and cannabinoid-type substances. Businessmen who established the largest NPS retail chains promoted the trade on a franchise basis, which meant that anybody ready to invest PLN 20-30 thousand could open a smart shop under the dopalacze.com chain. The spokesperson for the chain would get in touch with local media to share the information of new smart shops being opened and simultaneously generate publicity for the new NPS retail outlets. New smart shops started springing up exponentially and soon, by the end of 2010, 1 300 smart shops were up and running across the country. The sale was conducted through both online and offline distribution channels with two, arguably the largest, smart shop chains i.e. 'dopalacze.com' and 'smartszop' as competitors. Surprisingly, the media hailed the owner of the latter as the "King of Legal Highs". Initially, dopalacze.com not only often provided information on the contents of its products but also used its website to pride itself on holding a certificate issued by a scientific laboratory, which stated that it did not distribute controlled substances. Following the first batch of substances being declared illegal in 2009, their names were removed from labels and packaging in order to obstruct the process of controlling more substances. At the turn of 2008 and 2009 some of the most popular NPS sold in Poland included BZP (benzylpiperazine) and JWH-018 (synthetic cannabinoid – component of herbal blends). Apart from chemical substances such as BZP, NPS were also sold as herbal blends. The sellers claimed that they contained natural plant ingredients such as Kava Kava or Blue Lotus. Plant-based blends were still sold in smart shops after controlling 16 plants in March 2009 by way of the 2005 Drugs Act (*Argyreia nervosa, Banisteriopsis caapi, Calea zacatechichi, Catha edulis, Echinopsis pachanoi, Kava Kava, Leonotis leonurus, Mimosa tenuiflora, Mitragyna speciosa, Nymphea caerulea, Peganum harmala, Rivea corymbosa, Salvia divinorum, Tabernanthe iboga, Trichocereus peruvianus*). It can be assumed that most likely in the sold NPS psychoactive

effects were obtained by adding synthetic cannabinoids to the plant base. The first aforementioned amendment of the Act on counteracting drug addiction that was intended to combat NPS came into force as of 8 May 2009 (Journal of Laws "Dz. U." of 2009, No. 63 item 520). After criminalizing 18 NPS and plants, new NPS started to be introduced by the NPS distributors. After criminalizing BZP (benzylpiperazine), mephedrone (synthetic cathinone, which is still available on the drug market) became the most prevalence stimulant.

It is worth noting the increased activity of the company Dopalacze.com at that time, which were aimed to advertise new products. Piotr Domański, the spokesperson for Dopalacze.com, promoted the products of this company until June 2010, participating in conferences on NPS or denouncing police control measures, e.g. at the beginning of June 2009, when approx. 40 partner shops of Dopalacze.com had been inspected. From January to September 2009, nearly 2400 article and reports on NPS appeared in the press and on the Internet. Most information on this subject was published in regional and municipal press and websites (Zakrzewski, 2009). Local media, but not only them, reported on the dangers related to new psychoactive substances and the opening of new stores. It can be said that the media unwittingly promoted new retail outlets, while evidently aiming to warn of the danger that appeared in the local community in the form of a new smart shop.

The amended Act of 10 June 2010 on counteracting drug addiction [Dz.U. 'Journal of Laws' of 2010 No. 143 item 962] came into force on 25 August 2010 and resulted in control of another batch of new psychoactive substances, mainly mephedrone and synthetic cannabinoids. After criminalizing mephedrone, another synthetic cathinone - MDPV - became the most prevalent stimulant. It was detected in every fifth sample analysed by the National Medicines Institute in 2010 (Błażewicz, 2013). New varieties of synthetic cannabinoids such as UR-144 or AM-2201 appeared in place of the previously criminalized ones (Błażewicz, 2014). Unfortunately, legal changes intended to criminalize more new psychoactive substances did not impact on the rapidly growing NPS market in Poland. Major sellers such as Dopalacze.com or Smartszop offered NPS not only at brick-and-mortar stores but also online. Moreover, more potent substances started to arrive on the market. A new health threat to the public emerged in Poland also emerged in connection with the fact that new psychoactive substances had started to be injected. A fall in heroin availability in some Polish cities, such as Warsaw, in 2010 also exacerbated the situation. NPS were also used by clients of substitution treatment programmes, who are forbidden to use drugs while in treatment. This was due in part to lack of urine or blood tests for mephedrone and other cathinones, which could be carried out in a medical centre. Clients of

substitution treatment programs using NPS were not at risk of being expelled from the substitution treatment programme for violating the regulations, because it was very difficult to detect such substances. According to the results of a study of clients of needle and syringe exchange programs carried out in 2010 by the National Bureau for Drug Prevention, 10% of those surveyed had used mephedrone in the last 30 days prior to the measurement (Malczewski, 2013). Previously, this phenomenon was practically unknown. Injecting drug users mainly used opioids and amphetamines. In the second half of 2010, the media increasingly reported poisonings due to the use of NPS. In this situation, the government decided to apply the provisions of the Sanitary Inspection Act, which allowed for the closure of shops offering NPS. Based on Article 27.1 and 27.1 and Article 31a of the Act of 14 March 1985, on the State Sanitary Inspection, a decision was made to withdraw from circulation a product called „Tajfun[1]" (containing synthetic cannabinoids) and similar products that could pose a direct threat to human life or health. An administrative decision was issued at that time, which covered the whole of Poland, ordering the cessation of business activity of outlets introducing NPS into circulation. The above decision of the Chief Sanitary Inspector was dictated by the emergence of a direct threat to human life or health after using these products.

In early October 2010, over 3500 inspections were carried out and over 1300 outlets selling NSPs were closed in Poland. Several thousand sanitary inspectors and police officers took part in this operation. It was probably the largest operation aimed at the sale of psychoactive substances in Poland. In the same month, the highest number of medical interventions, which were probably a result of the use of NPS, was recorded (Burda, 2013). In order to strengthen actions aimed at the NPS market, new legal solutions were introduced at the end of 2010, changing both the Act on counteracting drug addiction and the Act on the State Sanitary Inspection.

The new changes came into force on 27 November 2010 (Journal of Laws of 2010, No. 213 item 1396) and introduced into the Polish legal system a new approach and more active forms of the state's response to the problem of NPS. First and foremost, NPS were defined as a substitute drug and were to be understood as "*a substance of natural or synthetic origin in any physical state or a product, plant, mushroom or any part thereof containing such a substance, used instead of a narcotic drug or a psychotropic substance or for the same purposes as a narcotic drug or a psychotropic substance, whose manufacture and placing on the market is not governed by separate regulations; regulations*

1 English name is: Typhoon

on the general safety of products do not apply to substitute drugs." The Act also banned *"advertising and promotion of foods or other products through suggesting that they have the effects of psychotropic substances or narcotic drugs or their consumption, even against the intended use, may cause the effects similar to the use of psychotropic substances or narcotic drugs."* Violating the abovementioned law was subject to a financial penalty, restriction of liberty or deprivation of liberty for up to a year. In order to halt further supply of substitute drugs onto the Polish market, legislators focused on banning the manufacture of substitute drugs and their introduction to trade. The financial penalty for breaking the ban was set at PLN 20 000 to PLN 1 000 000. At the same time, the enforcement of the regulations was vested in the State Sanitary Inspection. According to the amended law, in the event of a reasonable suspicion that a product poses a threat to human health or life, the State Sanitary Inspection had the right to withdraw the product from the market for a period of up to 18 months in order to conduct necessary assessment of its safety. The costs of the assessment and research were to be borne by the entity introducing the product to trade. In the event of ascertaining that the product did not pose a threat to human health or life, the costs were to be reimbursed by the State Treasury. It is worth noting that the new law clearly targeted individuals and entities introducing new psychoactive substances to trade and not the consumers, who were treated more as victims of such practices. This approach became a forerunner of more changes in the Polish law that were to follow. Consequently, the general approach to Polish substance users, including law enforcement, was changed in our legislation based on the recommendations of separating the 'world of users' from the 'world of criminals'. As a result of these changes, the State Sanitary Inspection was designated as the main institution in Poland responsible for combating new psychoactive substances. To this end, the Inspection was to apply solutions available in the administrative law.

2.2 New phase of NPS sales (2011–2014)

After the closure of brick-and-mortar stores in November 2010, the sale of NPS moved mainly to the Internet. In April 2011, the Criminal Office of the Polish Police Headquarters reported detecting 43 online stores offering substitute drugs and an increasingly wide range of psychoactive products. New psychoactive substance were increasingly being offered as „research chemicals". Customers visiting online stores could receive discounts depen-

ding on the amount of new psychoactive substance purchased (1g or 10g). On 4 March 2011, the Sejm passed another amendment to the Act on counteracting drug addiction, introducing 23 new substances detected in the psychoactive products to the list of controlled substances. This had been the third time NPS were banned since 2008.

At the end of 2012, there was a slight increase in medical interventions due to NPS. According to the Poison Control Center in Warsaw, in November and December 2012, there were over 40 cases per month of likely poisonings due to the use of NPS. Sellers started to open NPS shops again, but as hidden points of sale. They conducted „under the counter" sales in various places such as pawnshops or photocopy shops. The number of entities introducing substitute drugs to trade increased tenfold, from 11 in 2010 (data after closing NPS stores in October) to 103 in 2012. In response to this situation, the number of inspections conducted by the State Sanitary Inspection also increased to 548, resulting in nearly half a million zlotys worth of fines being imposed. The report by the Chief Sanitary Inspectorate (GIS) does not indicate how many of the fines imposed were actually paid by sellers. It is worth noting that a within the structure of the Chief Sanitary Inspectorate, the Department of Supervision over substitute drugs was established, which was tasked with reducing the supply of NPS. One of the new ideas for selling NPS by those introducing them into trade was to offer them as imitations of other products. According to data from the National Institute of Medicines (NIL), batches of new psychoactive substances were sold as substances changing the colour of fire, which contained, for example, the synthetic cannabinoid UR-144 (Błażewicz, 2013). These were products sold under names like blue, green, purple, small, big fire (e.g. Blue Fire). The label contained information that they were *magical imitations of herbs* and adding them to fire produces *colours you have never seen before*. Products containing 3,4-DMMC were sold under names such as „Bród", „Smród", „Fetor"[1] (Błażewicz, 2013). According to the label, they could be used to soil other people's belongings. Butyrfentanyl - a synthetic opioid from the fentanyl group, which is much more potent than morphine, appeared on the market. In August, it was added as a free sample to NPS by one of the Polish online stores (Błażewicz, 2014). Additionally, according to data from the National Institute of Medicines, UR-144 was detected in every third sample tested in 2012, and pentedrone in almost every fifth (Malczewski, 2013). Brick-and-mortar sales of NPS began to develop again in 2013. At that time, there were about 40 stores operating in Poland (Chief Sanitary Inspectorate, 2013), which was a return

1 English name of the products: "Mud", "Stench", "Stink"

to the situation from 2008; however, the new stores did not advertise their activities with official signboards, such as „dopalacze.com". Sellers often tried to hide that they were distributing NPS. The substances were offered under the counter, for example in sex shops, pawnshops or in outlets offering various other products. The change in the sales strategy was a result of inspections by the Sanitary Inspection supported by the police, which tried to close the newly established NPS sales outlets based under the new regulations. From the beginning of 2013 until the end of August of the same year, 427 inspections were carried out, over 15 000 products were confiscated, of which 540 were analysed, and a total of PLN 7 million worth of fines was imposed (Hołownia, 2013). Most likely, the most frequently occurring substance in products sold in 2013 was UR-144, a synthetic cannabinoid. This substance also occurred in other countries such as France, Norway or Latvia, where UR-144 was detected in almost every fifth product (Zile-Veisberga, 2013).

It is worth noting that brick-and-mortar shops were not only opened in Poland. In Latvia, for example, there were around 50 NPS shops in 2013, and in the Czech Republic shops were opened near the Polish border after they had been closed in our country in 2010. According to the National Institute of Medicines, every third analysed product in Poland (out of 433) contained UR-144, every fifth contained pentedrone (19%), followed by isopentedrone (15%) and 3,4-DMMC (10%). These are substances from the cathinones group that have a stimulating effect. The increase in the availability of NPS might have translated into the higher number of medical interventions that were undertaken after probable NPS-induced poisonings. According to data from the Poison Control Centre in Warsaw, in 2013, 1078 medical intervention reports were received, while in 2012 the total was three times as low: 299 (Burda, 2013). The most prevalent NPS in Poland in 2014 and 2015, according to the I-TREND[2] study, were cathinones and synthetic cannabinoids such as 3-MMC; ethcathinone; pentedrone; 3,4-DMMC; alpha-PVP; buphedrone; pMPPP as well as UR-144 and AM-2201 (Jabłońska et al., 2017). According to that study, one-third of newly purchased psychoactive substances had a different chemical structure to the one reported by the sellers (Malczewski, Sałustowicz, 2015). Additionally, an online survey conducted as part of the I-TREND project with a sample of n=1385 individuals showed that the most

2 The I-TREND study was funded by the European Commission. In Poland, the projects was conducted by the SWPS University (coordinated by Prof. Piotr Sałustowicz). The authors of this publication also participated in the study. As a result, a scientific publication titled "New Psychoactive Substances - New Risks and Challenges" was produced (available at: https://www.cinn.gov.pl/portal?id=15&res_id=1280468). More information is available on the SWPS website: https://swps.pl/nauka-i-badania/granty/5757-i-trend.

prevalent new psychoactive substance last used was mephedrone (17.7% of respondents) (Wiszejko-Wierzbicka et al., 2016). In the entire population of individuals aged 15-64, the prevalence of NPS use was low, with a small proportion of respondents (2.2%) reporting ever using them in their lifetime, according to studies conducted in 2014 and 2015 (Estimation of the prevalence of selected addictions, 2015).

On the other hand, the Flash Eurobarometer 401 survey showed that new psychoactive substances were used in Poland above the EU average. In 2014, this indicator was 9%, while the EU average was 8% for people aged 15-24 (Young People and Drugs..., 2014). It is worth noting that in the first such study of 2011, the percentage was the same: 9%. However, in 2011, Poland along with Latvia ranked second and followed Ireland (22%), with an EU average of 5%, while in the second study of 2014 Poland ranked eighth.

2.3 "Mocarz" (Strongman) and record numbers of poisonings

In March 2015, the number of poisonings due to NPS exceeded 500 cases in one month. In the same year, an amendment to the Act on counteracting drug addiction was prepared, which was to bring over 100 NPS under control. These substances had been present in the structure of psychoactive products sold in brick-and-mortar as well as online stores for several years. The latest criminalization had taken place in 2011. As in previous years, NPS sellers tried to prepare themselves for the introduction of new substances to the list and the withdrawal from the market of those that would be subject to control under the new phase of criminalization. One of the larger companies selling NPS had sent its products to one of the laboratories analyzing NPS before the law came into force on July 1, 2015. This way, distributors wanted to obtain information about the chemical structure of the substances they were selling in order to withdraw from the market those that would soon become illegal under the new law. Selling substances subject to control under the law was punishable by up to 12 years in prison (Article 56 of the Act on counteracting drug addiction).

For years, „Mocarz" had been one of the more popular products on the NPS market. It had most likely been sold since 2009 in the form of a so-called herbal blend (NPS-soaked neutral plant material). In the case of „Mocarz", these were synthetic cannabinoids acting similarly to marijuana. The structure of this product changed several times over the years. According to the National Institute

of Medicines in Warsaw, depending on the year, „Mocarz" contained: JWH-203, JWH-081, JWH-019 (in 2010), UR-144 and 5F-AKB48 (in 2014), and UR-144 and 5-FUR-144 (XLR-11) (in 2015). Most likely, even products available on the market at the same time in different places could contain other substances depending on the production batch. Changes in the structure of „Mocarz" were also the result of criminalizing more NPS. The „kolekcjoner.pl" company selling „Mocarz" organized a buy-one-get-one-free promotion of its products at the end of June 2015. Likely, the concentration of psychoactive substances in such products could have also increased. Unfortunately, there is no available information on quantitative analyses that could confirm this hypothesis. As a result, users could have obtained significantly more psychoactive substances for a lower price. The following synthetic cannabinoids were detected in the „Mocarz" products seized by the police in Silesia: UR-144, 5-FUR-144 (XLR-11), BB-22, 5F-PB22. According to media reports, the synthetic cannabinoid AM-2201 was present in „Mocarz". It was one of the most popular „legal highs" from 2013 to 2015, but none of the studies available to us have confirmed that this substance was present in „Mocarz" sold in June and July. However, this scenario cannot be ruled out.

In the second weekend following the legal changes as of 1 July 2015, a wave of poisonings with a product called „Mocarz" swept through Poland. According to media reports, hundreds of people, mainly in Silesia, were taken to hospitals. Patients were often unconscious and unresponsive upon admission to hospital. After the analysis of the situation at the National Bureau for Drug Prevention, two hypotheses were formulated to potentially explain the phenomenon of such a rapid increase in the number of poisonings. One was that drug dealers were clearing their warehouses and increasing the supply of NPS on the market to quickly get rid of large amounts of substances that would soon become illegal. They were also increasing their potency and lowering their price. The problem was that none of the substances present in „Mocarz" up to that point had caused such serious consequences and some of these substances had been on the market for many years. Therefore, another hypothesis explaining the rapid increase in poisonings held that a new synthetic cannabinoid had replaced NPS criminalized on 1 July. However, from the beginning, obtaining information to verify the working hypotheses was difficult. The Central Forensic Laboratory of the Police detected the MDMB-CHMICA substance in NPS in two provinces. This substance began to appear in Europe at that time, and with it came reports of poisonings caused by it. According to information from the EMCDDA, from September 2014 to July 2015, 17 cases of poisoning and 6 deaths had been confirmed in Europe in

which MDMB-CHMICA was involved (EMCDDA, 2017b). This substance was later subjected to risk assessment and then banned in Europe and worldwide under the United Nations system. At least one case of death caused by MDMB-CHMICA has been described in Polish literature (Adamowicz, 2016). According to Dr Adamowicz, *analyses carried out by the Institute of Forensic Research in Krakow have confirmed that many of the poisonings observed in Poland in July 2015 were a result of using the product „Mocarz" containing MDMB-CHMICA*.

In July 2015, there were nearly 2 000 medical interventions, likely due to NPS poisoning. Furthermore, in the entire year of 2015, there was a record number of 7 284 cases, while in the following year, the number of poisonings decreased to 4 369 (Raport Głównego..., 2017). However, between 2013 and 2015, only 34 fatal cases related to new psychoactive substances were reported, and in only 8 cases was it confirmed that NPS were the cause of death (Bujalski et al., 2017).

The Act on counteracting drug addiction established the legal basis for risk assessment procedures in 2015. They remain unchanged to this day. The risk assessment of new psychoactive substances primarily considers their impact on human health. The NPS risk assessment system involves conducting controlled procedures based on rational, scientific grounds and interdisciplinary expert evaluation. The aforementioned amendment to the Act created the legal basis for the establishment of a team responsible for assessing risks associated with using new psychoactive substances that pose a threat to human health or life. The team serves in an advisory capacity to the Minister of Health and includes experts in chemistry, pharmacology, toxicology, psychiatry, social sciences and law. Members of the team are appointed by the Minister of Health upon the recommendation of ministers of justice, national defence, internal affairs, economy and transport. The team's tasks include evaluating substances for potential risks to human health and life and in terms of social harm. Based on the assessment the Minister of Health receives recommendations for specific substances to be included in the Annexes to the Act on counteracting drug addiction or in the Regulation on new psychoactive substances. The level of control is proportional to the potential harm that certain substances may cause.

Despite the new legislation introduced in 2015, between 2015 and 2018, NPS were still on sale through several distribution channels. In 2016, there were around 100 brick-and-mortar stores that were either independent outlets or stores associated with a specific distributor, such as the stores in Pabianice under the „kolekcjoner.nl" chain. Sales on the internet took place on websites, but NPS could also be obtained on hidden markets, such as Silk

Road 3.0[1]. NPS were also offered by drug dealers. Administrative law regulations were applied to combat the NPS market in Poland. Fines for NPS sellers at that time could reach up to PLN 1 million. Such a high penalty was supposed to serve as a deterrent. However, given the number of stores operating, it did not fulfil its intended role because the enforceability of the imposed penalties was low. As the report by the Supreme Audit Office (NIK) stated: *between 2010 and 2016 throughout the country, the State Sanitary Inspection imposed nearly PLN 65 million in fines; however, only PLN 1.8 million (3%) was paid to the state budget*. As the NIK data show, the inspected sellers paid only a small percentage of the fines imposed.

2.4 New legislative solutions introduced in 2008 and subsequent years

In response to the rapidly growing NPS phenomenon, several modifications have been made to the Polish drug law since 2009. The most significant changes were introduced in 2018. On 20 July 2018, the Sejm adopted an amendment to the Act on counteracting drug addiction and the State Sanitary Inspection, which introduced innovative and crucial legal changes.

a) New definition of new psychoactive substance and substitute drug

A new psychoactive substance was defined as any substance or group of substances of natural or synthetic origin in pure form or in the form of a preparation acting on the central nervous system, other than a psychotropic substance or narcotic drug, posing hazards to health or the public comparable to those posed by psychotropic substances or narcotic drugs, or one which imitates the effects of these substances, as specified in the regulations issued pursuant to Article 44f.3 of the Act on counteracting drug addiction. Article 44f.3 of the Act on counteracting drug addiction authorizes the Minister of Health to announce, by way of Regulation, a list of psychotropic substances, narcotic drugs and other new psychoactive substances, as explained in clause 4. A substitute drug means a product containing a substance acting on the central nervous system that can be used for the same purposes as a narcotic

1 Sometimes referred to as the "eBay of drugs" due to a sales model similar to the existing e-commerce platforms such as eBay. It is an anonymous digital platform that uses anonymizing software (such as Tor) and cryptocurrencies (such as bitcoin) to enable peer-to-peer trade in goods (including drugs and new psychoactive substances) and services while maintaining anonymity.

drug, psychotropic substance or new psychoactive substance, the production and placing on the market of which is not separately regulated.

b) Penal and administrative sanctions

Since 2018, NPS have been subject to penal law and treated by the law in a way similar to drugs. Prior to the amendment, only the manufacture and placing of new psychoactive substances on the market were punishable, and sanctions were in the form of financial administrative fines. After the amendment, the sanctions became penal in nature, resembling the penalties for violations of traditional laws on drugs such as narcotic drugs and psychotropic substances. Penal sanctions for basic types of offenses are presented in Table 2.1.

Tabele 2.1. Penal sanctions for basic offenses related to new psychoactive substances according to the amended Act of 2018 on counteracting drug addiction

Type	Possession (Article 62b)	Manufacture (Article 53)	Placing on the market (Article 56)
Basic[a]	Fine	Fine, restriction of liberty or deprivation of liberty for up to 3 years	Fine and deprivation of liberty from 6 months to 8 years
Qualified[b]	Fine, limitation of liberty or deprivation of liberty for up to 3 years	Fine, restriction of liberty or deprivation of liberty for up to 3 years	Fine and deprivation of liberty from 3 to 12
Privileged[c]	Discontinuance of penal proceedings	No sanctions	Fine, restriction of liberty or deprivation of liberty for up to 1 year

a Committing a basic offence results in imposing a basic sanction.

b Committing offences of supplying another person, including minors, with substantial amounts of psychoactive substance with intent to gain material benefit results in imposing the toughest sanction.

c Committing offences involving lower amounts of banned substances (specified in the Act as an offence of lesser severity) results in imposing more lenient sanctions.

By doing so, the legislator expanded the scope of penalization to include the possession of NPS, but decided to impose only a fine for basic types of offences, as opposed to traditional drugs, where the penalty is more severe. In addition, in the case of possession of small amounts of NPS for personal use, solutions similar to Article 62a for traditional drugs were applied, allowing the prosecutor or court to discontinue the penal proceedings. However, when it comes to possession of significant amounts of NPS, the offender is subject to a fine, restriction of liberty or deprivation of liberty for up to 3 years. The sanctions for violating other provisions related to the manufacture or placing NPS on the market differ only slightly in their severity compared to offences related to narcotic drugs or psychotropic substances.

In regard to substitute drugs, the situation did change following the introduction of the abovementioned regulations and these substances are still subject to administrative proceedings. In the event of detection of substances deemed to be substitute drugs, the costs associated with testing and destroying the product are borne by the entity placing the substance on the market. In addition, the entity introducing substitute drugs to trade or manufacturing them may be subject to a fine of between PLN 20 000 and 1 000 000.

c) List of controlled psychotropic substances, narcotic drugs and new psychoactive substances

Pursuant to the provisions of the amended Act, a different way of regulating the list of controlled psychotropic substances and narcotics was introduced. Until 2018, any modification of this list had required an amendment to the schedules to the Act, which was time-consuming and limited the ability of the legal system to swiftly respond to emerging threats. Under the new provisions, the formula of schedules to the Act was abandoned in favour of a list of controlled psychotropic substances, narcotic drugs and new psychoactive substances specified in a Regulation of the Minister of Health. This measure significantly reduced the time required to criminalize substances. Currently, the Minister of Health's Regulation contains a list of controlled narcotic drugs, a list of controlled psychotropic substances, a list of controlled new psychoactive substances[1] and so-called generic groups.

1 The lists contain substances that were previously included in Schedules 1 and 2 to the Act. They correspond to the lists included in the international law, namely Single Convention on Narcotic Drugs of 1961 and Convention on Psychotropic Substances of 1971. The lists are constantly updated following changes to the abovementioned conventions and decisions of the European Commission concerning the supplementation of annexes to Council Framework Decision 2004/757/JHA of 25 October 2004 laying down minimum provisions on the constituent elements of criminal acts and penalties in the field of illicit drug trafficking (OJEU L 335 of 11.11.2004, p. 8, as amended).

d) Generic groups

A new innovative element of the aforementioned legislation was the introduction of generic groups i.e. a different approach to defining controlled substances. Instead of listing individual substances in schedules, collective definitions were used to precisely describe the chemical structures of controlled groups of compounds. Initially, four generic groups were defined:

1) 2-phenylethylamine derivatives – NPS group 1,
2) cathinone derivatives (2-amino-1-phenylpropan-1-one) – NPS group 2,
3) synthetic cannabinoids (cannabinomimetics) – NPS group 3,
4) fentanyl derivatives – NPS group 4.

Two more groups were subsequently added:

- Benzodiazepines – NPS group 5,
- Tryptamine derivatives – NPS group 6.

As a result of the new approach, it is now possible to criminalize not individual substances, but entire groups of substances. This is particularly important given the specific nature of the NPS market. For years, manufacturers have tried to circumvent the law by making small changes to the chemical structure of the substances they sell. These substances had similar effects to the already controlled substances. These modifications meant that a given new psychoactive substance was not illegal. The new solutions have significantly limited this practice and the introduction of generic groups has proved to be an effective tool in the fight against NPS manufacturers and sellers.

e) Register of poisonings

Under the amended Act, a register of poisonings with substitute drugs or new psychoactive substances was also established. This register is run by the Chief Sanitary Inspectorate. Entities engaged in medical activity or conducting post-mortem examinations are responsible for reporting (to the local sanitary inspector) any (suspected) poisonings that have occurred.

It is worth adding that in November 2018 a Memorandum of Agreement was signed between the Chief Sanitary Inspector, Commander-in-Chief of Police, Head of the National Revenue Administration, Prosecutor General, Commander-in-Chief of the Border Guard and Chief Pharmaceutical Inspector. The aim of the Memorandum is to efficiently and effectively carry out tasks related to countering the introduction of substitute drugs and new psychoactive substances to trade on the territory of the Republic of Poland. The agreement

is intended to counteract public health hazards and social harm caused by the placing of substitute drugs and new psychoactive substances on the market. It provides for cooperation and fast exchange of information at national and local levels, which allows for a quick and coordinated response to emerging threats.

In 2021, the Supreme Audit Office (NIK) conducted an audit „Preventing the availability of new drugs". The audit was aimed to assess, among other things, the functioning of the new regulations. The NIK identified several minor organizational shortcomings in terms of delays in publishing amendments to the ministerial regulations as well as problems and barriers to conducting administrative proceedings, but in overall assessment, it positively evaluated the functioning of the regulations. In the general assessment The NIK noted that: "*the availability of new drugs has been limited as a result of the introduced legislative and organizational solutions, as of 21 August 2021, in the entities responsible for combating such substances. After the entry into force of the amending Act, which introduced criminal liability for offences related to new psychoactive substances in particular, a decrease in the number of poisonings due to the use of new drugs. The report also noted that controlled entities cooperated with other authorities diligently and adequately to their resources and tasks assigned. Cooperation in this area was primarily based on concluded agreements and involved mainly the exchange of experiences and implementation of joint information and training projects, which contributed to the reduction of the availability of new drugs* (NIK, 2021).

2.5 Abatement of the problems

After the legal changes were introduced in 2018, positive changes were observed regarding the use of NPS. The results of school youth surveys, which were carried out on a nationwide sample of final-year secondary school students using an auditorium survey at the end of 2021, indicated positive trends regarding the use of NPS[1]. Furthermore, the measurements by the CBOS Foundation and National Centre for the Prevention of Addictions showed a significant decrease in the use of NPS. The percentage of respondents who had ever experimented with these substances was 2.6%, in the last 12 months prior to the survey it was 0.3% with the same percentage of respondents (0.3%) reporting using NPS in the last 30 days. These are the lowest rates since the beginning of the research in 2008 (CBOS Foundation, 2018).

1 A detailed discussion of these surveys can be found in Chapter 6 of "Polish Youth, Drugs and New Psychoactive Substances".

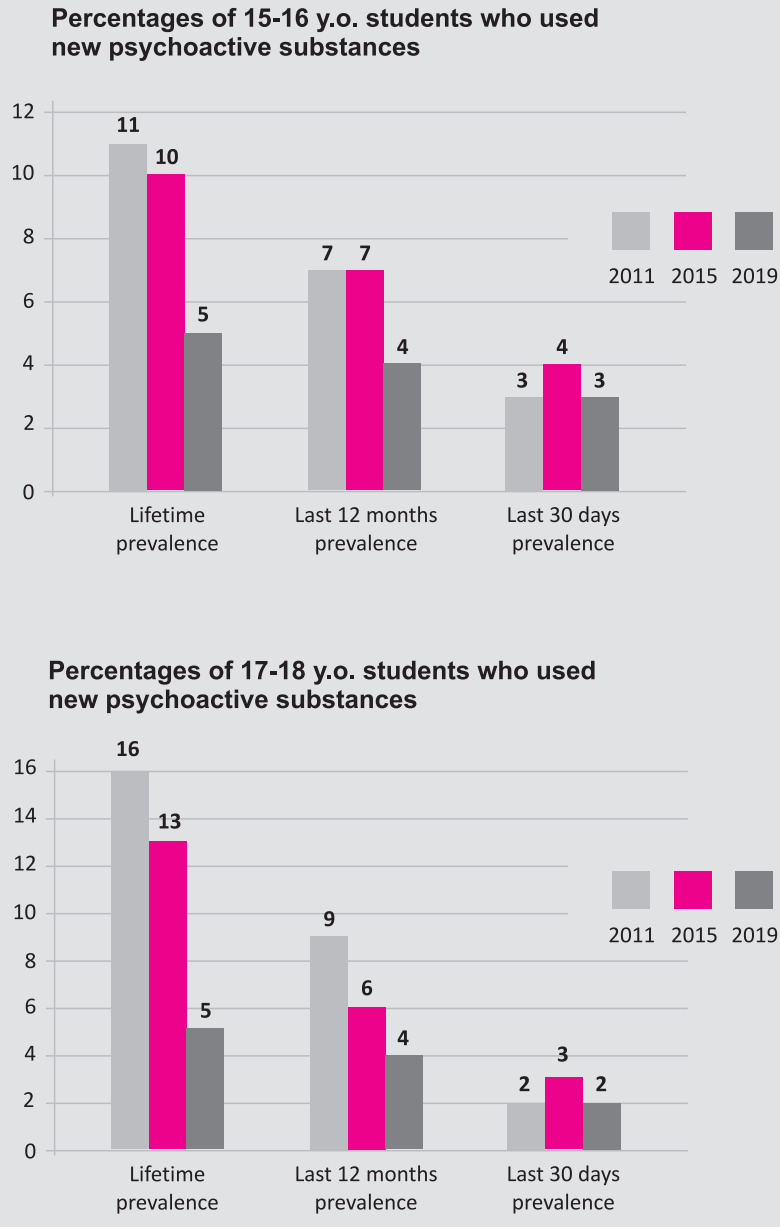
A decrease in the prevalence of NPS use among young people was also observed in the ESPAD survey. In 2011, for the first time, questions about NPS were included in the ESPAD survey. The percentages of current users turned out to be significantly lower (among third-grade upper-primary school students - 3.6%, among second-grade secondary school students - 3.5%). Only slightly more than 2.5% of upper-primary school students and 2.2% of secondary school students used NPS in the last 30 days before the survey. The analysis of the survey results showed that the NPS use is not differentiated by the gender of the respondents. The percentages of people reporting the use of these substances are similar among boys and girls. The results of the ESPAD survey show that the prevalence of NPS use has been decreasing since 2011.

Similarly, the percentages of respondents offered to purchase, be given or use these substances have been decreasing. The same trend is observed among respondents who estimate the availability of NPS as high. It is worth noting a growing group of respondents who believe that even experimenting with NPS poses a high risk (Sierosławski, 2019).

In 2015, a record number of 7 357 poisonings due to the use of NPS were reported. In the following years, the number of poisonings decreased, with a significant drop in 2020 (Figure 2.2). It is worth noting that new legislative solutions were introduced in Poland in 2018. In 2021, there were 517 poisonings, with the highest number in Lodzkie province - 187. According to data from the Chief Sanitary Inspectorate (GIS), the average monthly number of poisonings/suspected poisonings induced by new psychoactive substances/ substitute drugs in 2021 was 43, which was the lowest value recorded since 2013. It was also observed that among 18-year-olds, the percentage of NPS-related poisonings had been steadily falling and it was the lowest among all NPS-related poisonings. In 2015, it was 26.5% while in 2021, it was 7.5%. Poisonings are observed mainly among men, accounting for 82% of cases in 2021. The latest data for 2022 indicate a further decrease in the number of NPS-related poisonings. This year, 299 cases have been reported.

As part of expanding control over NPS, the Regulation of the Minister of Health of 27 September 2019 come into force. The document amended the Regulation on the list of controlled psychotropic substances, narcotic drugs and new psychoactive substances and added benzodiazepines to the list of new psychoactive substances. Furthermore, on 6 April 2021, another Regulation of the Minister of Health amending the Regulation on the list of controlled psychotropic substances, narcotic drugs and new psychoactive substances came into force. It introduced another generic group, namely *tryptamines*. Consequently, by the end of 2022, six generic groups had been introduced.

Figure 2.1. Results of ESPAD surveys on NPS use in years 2011-2019



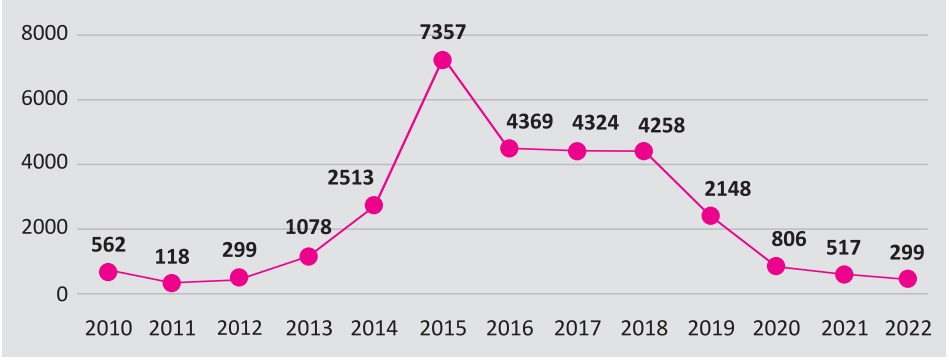
Source: KBPN, PARPA and IPiN.

Tabela 2.2. NPS-related poisonings in years 2015-2022 by province (GIS data)

Province	2015	2016	2017	2018	2019	2020	2021	2022
dolnośląskie	280	114	110	141	69	24	29	19
kujawsko-pomorskie	480	208	250	262	129	73	23	19
lubelskie	206	189	190	274	85	18	10	2
lubuskie	412	143	63	157	105	23	1	14
łódzkie	1499	1441	961	1094	625	250	187	47
małopolskie	149	112	279	150	56	27	39	72
mazowieckie	433	203	271	304	136	46	12	13
opolskie	30	6	12	16	6	1	1	2
podkarpackie	143	39	21	52	20	0	1	0
podlaskie	142	48	54	52	24	12	5	5
pomorskie	390	253	176	110	67	36	13	6
śląskie	1854	987	1266	1114	595	171	45	13
świętokrzyskie	132	142	106	63	16	6	7	4
warmińsko-mazurskie	308	98	118	94	44	4	1	1
wielkopolskie	712	324	395	290	139	79	109	72
zachodniopomorskie	187	62	52	85	32	36	34	10
TOTAL	**7357**	**4369**	**4324**	**4258**	**2148**	**806**	**517**	**299**

Source: OKZ Warszawa and GIS.

Figure 2.2. NPS-related poisonings in years 2010-2022



Source: GIS report on poisonings induced by substitute drugs or new psychoactive substances in Poland.

3. Awareness raising and prevention of NPS

In Poland, the first preventive actions combined with a broadly addressed public education programme in the field of NPS were mainly implemented in the online environment.

In 2008, a website on NPS prevention was created at www.dopalaczeinfo.pl. The website has been operating for over 15 years. In 2009, the National Bureau for Drug Prevention (currently the National Centre for the Prevention of Addictions) launched an awareness and prevention campaign called „Dopalacze mogą Cię wypalić. Poznaj fakty" („Legal highs can burn you out. Get the facts."). The main goal of the campaign was to debunk the myths propagated by NPS distributors (e.g. about the safety of their consumption), present reliable information on new psychoactive substances including risks associated with their use and their actual legal status. Another awareness campaign by the National Bureau for Drug Prevention, „Dopalacze Wypalacze" („Legal highs cause burnouts"), was aimed at parents and educational institutions. As part of the campaign, a lesson plan and educational leaflet were developed for parents. The lesson plan and widely distributed leaflets allowed for conducting sessions with parents or guardians of young people. Information about the campaign was also available on the website of the National Bureau for Drug Prevention (www.kbpn.gov.pl).

An important element of structural activities aimed at reducing the phenomenon of NPS use was the universal prevention program "Smak życia, czyli debata o dopalaczach" (Taste of Life or a Debate on NPS) developed by Dr. Krzysztof Wojcieszek on behalf of the National Bureau for Drug Prevention (currently the National Center for the Prevention of Addictions). The program is based on stimulating methods and is targeted on secondary school students aged 15-18. The aim of the program is to provide young people with basic information about NPS and risks associated with their use, make them more cautious and consequently reduce readiness to experiment with these products. The method of brief intervention allows for the creative use of cognitive dissonance among participants in relation to the new knowledge and assessment of their own risky behaviours. It is worth emphasizing that in the case of NPS as well as psychoactive substances in general, the main action in the area of prevention should be the implementation of evidence-based prevention programmes. To this end, the Recommended Prevention Programmes database was created in 2008 (https://programyrekomendowane.pl). The main objectives of the recommendation system include improving the quality

of prevention programmes, promoting mental health, disseminating effective prevention strategies as well as methods of developing programs.

The standards and framework of the recommendation system were developed at the initiative of the National Bureau for Drug Prevention (KBPN) in collaboration with the Institute of Psychiatry and Neurology, Centre for Education Development of the Ministry of Education and Science and State Agency for Solving Alcohol-related Problems (PARPA). Currently, the project is led by a new institution established after merging KBPN and PARPA - the National Centre for the Prevention of Addictions.

On the Recommended Prevention Programmes website, run by the KCPU, there is a database of effective prevention activities. Additionally, in order to promote high quality prevention activities, the National Bureau for Drug Prevention participated in the development and implementation of the European Quality Standards in Drug Prevention[1].

3.1 NPS-related materials

Activities related to the prevention of NPS have also been implemented by other institutions. It is worth noting that the Ministry of National Education has undertaken a coordinated action to prepare materials for heads of schools and other institutions on the subject of preventing the use of new drugs by young people.

Over the past few years, the KBPN (National Bureau for Drug Prevention) has developed many preventive materials, most of which have been issued and distributed in the form of brochures, posters and leaflets. The materials are available on the National Bureau's website. It is worth using these materials.

The materials include:

Universal prevention program "Smak życia, czyli debata o dopalaczach" (Taste of Life or Debate about Legal Highs), based on stimulating methods. It is targeted on secondary school students aged 15-18 (available at: http://www.kbpn.gov.pl/portal?id=15&res_id=1244472).

Material for conducting preventive activities intended for school psychologists, school educators, prevention specialists, experienced teachers, educators or youth leaders. The guide in the form of a brochure "Bliżej siebie,

1 Materials related to the European Quality Standards in Drug Prevention, including several PDFs, can be found on the KCPU website: https://kcpu.gov.pl/profilaktyka-i-edu-kacja/ europejskie-standardy/

dalej od narkotyków" (Closer to Each Other Farther away from Drugs) concerns the issue of psychoactive substances and is addressed to parents (available at: http://www.kbpn.gov.pl/portal?id=15&res_id=3648729).

Scenario for a meeting with parents at school on the topic of NPS. is designed to take approximately two lesson hours and is intended to be used by educators, psychologists or form teachers. The aim of the meeting is to draw the attention of parents to this new threat (available at: http://www.kbpn.gov.pl/portal?id=15&res_id=879950).

Another stage in the activities aimed at providing reliable and clear information about NPS was the development of two information leaflets on fentanyl by non-governmental organizations:

The leaflets of „Beware of new opioids" and „Beware of fentanyl and its derivatives" were prepared on the initiative of the National Bureau for Drug Prevention (KBPN) in response to the newly appearing opioid substances from the fentanyl group on the Polish market. Most substances in this group are characterized by much stronger effects compared to traditional opioids such as heroin. This increases the risk of acute poisoning and even death among their users. In response to this threat, the KBPN organized a series of meetings with experts from harm reduction programmes i.e., people with extensive experience working with opioid-dependent individuals. During the meetings, the current situation was evaluated, information deficits were identified and the most effective form of reaching opioid users with warnings was determined. As a result of these actions, representatives of non-governmental organizations prepared content for the leaflets. This ensured the best matching of the form and language used in the leaflet to the target audience. The KBPN financed the graphic design and printing of a leaflet addressed to clients of harm reduction programs. The aim of these activities was to increase awareness among opioid users about new threats and to provide information on what to do in case of poisoning. Consequently, two materials were created: one addressed to injecting drug users while the other addressed people using fentanyl in clubs and discos. The first leaflet „Be careful with new opioids" was intended for publication on the Internet while the other „Be careful with fentanyl and its derivatives" (double-sided) was intended for distribution to users by outreach workers at needle and syringe exchange programmes.

Preventive activities regarding new psychoactive substances and drugs were also carried out online. The nationwide campaign „Bad trip – change the settings" (Krzywo weszło – zmień ustawienia) was launched by the Polish Drug Policy Network Foundation. This awareness campaign was targeted on

young people aged 16-20 and their parents. The main recipients were people not using drugs in the risk group/ endangered by drug addiction as well as occasional and problem drug users. The campaign comprised a simple online game (http://krzywoweszlo.pl) and knowledge database. The main task in the game is to assemble a character from scattered pieces and restore it to its original correct state. The gameplay and choices made while playing are about "changing settings". In a friendly fashion, the gamer is shown the signposts they should follow in the real life. The respective fragments of the character regain normal functions as soon as they receive the right settings in 6 behaviour categories. The campaign was conducted from November 2018 to December 2019 by the Polish Drug Policy Network Foundation on behalf of the National Bureau for Drug Prevention. The online promotion of the campaign took place on social media platforms, YouTube, through Google Ads and advertising websites such as WP and Interia as well as on websites that are frequently visited by young people.

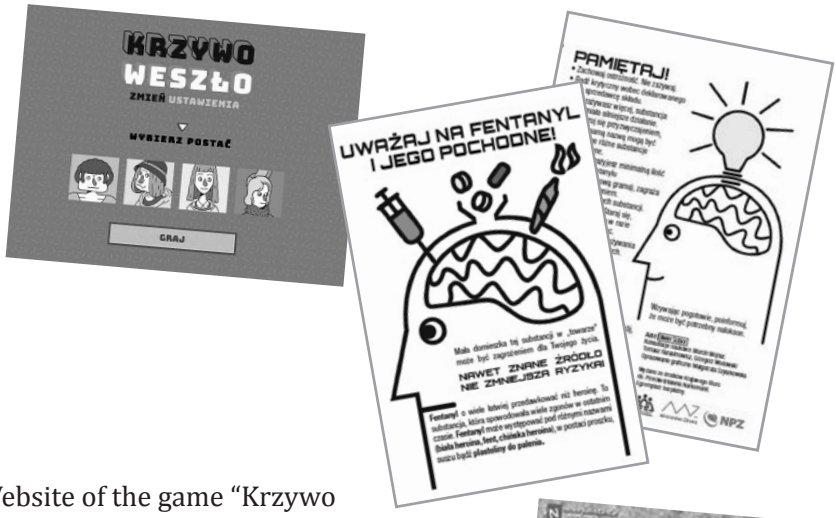


Image 1. Website of the game "Krzywo weszło zmień ustawienia"
Source: https://krzywoweszlo.pl

Image 2. Leaflet on fentanyls
Source: https://www.kbpn.gov.pl/wydawnictwa_on_line.htm?id=110707

Image 3. Website on NPS in operation since 2018
Source: https://dopalaczeinfo.pl

3.2. Books for medical professionals

As part of the information and educational activities on NPS, the NEPTUNE publication – Novel Psychoactive Treatment UK Network was translated into Polish and published in 2018 on the initiative of the National Bureau for Drug Prevention. The English version was prepared by the British organization The Health Foundation. It is a compendium of knowledge on how to deal with patients who use psychoactive substances. It provides guidelines for both clinical and psychosocial management. The translation and publication of the book in Polish were carried out by the Medical University of Warsaw. The book is primarily intended for healthcare professionals as well as anyone who would like to deepen their knowledge of NPS. The Polish version of the publication is called „ Standardy postępowania wobec osób używających nowych substancji psychoaktywnych (NSP) – Poradnik dla pracowników medycznych" and is available in PDF format here: https://www.kbpn.gov.pl/portal?id=15&res_id=9714092.

Additionally, in the same year, the Medical University of Warsaw, on the initiative of the National Bureau for Drug Prevention, prepared a publication titled „Management of acute and chronic consequences of club drug and new psychoactive substance use – clinical guidelines". The publication is also available in the form of a PDF file here: https://www.kbpn.gov.pl/portal?id=15&res_id=8591252. The publication is a guide for medical professionals and covers a wide range of topics related to NPS in a concise manner. The thematic scope covers areas such as the effects of individual groups of NPS, identifying poisoning, therapeutic management guidelines, risk group characteristics and organization of healthcare. These guidelines can be helpful in managing NPS users, particularly those with suspected NPS-related poisoning. The publication is intended not only for healthcare workers but also for students of medical and social sciences and for all those who wish to deepen their knowledge of NPS.

3.3. NPS alerts

The National Bureau for Drug Prevention also tried to respond to the current situation by sending warnings regarding NPS. Both within the Polish and European Early Warning System (EWS)[1], in addition to current exchange of

1 The Early Warning System is described in Chapter 4 "Analysis of data on NSP identification in Poland" hereof

information on NPS, there is an alert system whose aim is to quickly identify potential hazards and promptly react to emerging problems related to new psychoactive substances or new ways of using old substances. The functioning of the alert system is presented below on the example of the synthetic cannabinoid 4F-MDMB-BICA, which is structurally related to previously identified 4F-MDMB-BINACA and 5F-MDMB-PICA. Both substances in the past were also responsible for severe poisonings which posed a threat to the health and even lives of their users. The substance is probably a strong agonist of cannabinoid receptors. It came up in various forms in identified samples such as white or orange powder, tobacco impregnated with the substance and herbal blend.

The National Bureau for Drug Prevention also attempted to respond to the current situation by issuing warnings regarding NSPs. In addition to the ongoing exchange of information about NSPs within the Polish and European early warning systems (EWS), there is a system of alerts aimed at the rapid identification of potential threats and immediate response to emerging problems related to new substances or new ways of using old substances. The functioning of the alert system was presented below, using the example of the synthetic cannabinoid 4F-MDMB-BICA, which is structurally related to previously identified 4F-MDMB-BINACA and 5F-MDMB-PICA, both of which were previously associated with causing severe poisoning, posing a threat to the health and even the lives of their users. It is likely a strong agonist of cannabinoid receptors. The substance was found in various forms, such as white or orange powder, tobacco impregnated with the substance, and herbal material.

According to the publication, the substance 4F-MDMB-BICA was first identified in Europe in July 2020. Soon after, information about the hazards associated with this substance began to emerge in Hungary, where a series of poisonings and deaths had occurred. At that time, 11 lab-confirmed deaths had been reported in a short period in Hungary (between May and August, Hungary reported 21 deaths to the Early Warning System). Acute poisonings were also reported in other European countries. In some cases, other synthetic cannabinoids were also detected in biological samples. The reported clinical symptoms of poisoning included chest pain, breathing problems, seizures and aggressive behaviour. In August 2020, the EMCDDA sent out an alert about the potential threat posed by this substance (Christie R., 2021). Also in August, the first identification of this substance in Poland was reported, which resulted in the preparation and dissemination of a Polish alert based on all the information available. The alert contained information about the details of the events

(deaths, poisonings and symptoms of poisoning), general information about the substance, its physical form and the potential risks to users. It was sent to workers in all harm reduction programmes, i.e. those who work directly in the drug user community as well as to laboratories and institutions that make up the Early Warning System. Later on, the Chief Sanitary Inspector, as an Early Warning System cooperating partner, issued an official warning about this substance. It should be noted that at the level of Polish law, this substance had already been placed under control based on the generic definitions.

4. Data analysis of NPS identifications in Poland

The Early Warning System for New Psychoactive Substances (EWS)[1] is a fundamental part of the formal mechanism for information exchange, risk assessment and control of new psychoactive substances in the European Union. The system was established in 1997 under the „Joint Action on New Synthetic Drugs Early Warning System" (Joint Action 97/396/JHA) in response to the increasing number of psychoactive substances with drug-like effects that were not controlled by international drug law or national law in Member States. In subsequent years, the adopted solutions underwent several modifications, the most significant of which was introduced in 2017. Its aim was to streamline the functioning procedures for information exchange, risk assessment and control of new psychoactive substances. Currently, the EWS is governed by the following documents:

- REGULATION (EC) NO 1920/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 12 December 2006 on the European Monitoring Centre for Drugs and Drug Addiction as amended by REGULATION (EU) 2017/2101 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 November 2017 amending Regulation (EC) No 1920/2006 as regards information exchange, early warning system and risk assessment procedures on new psychoactive substances.

- COUNCIL FRAMEWORK DECISION 2004/757/JHA of 25 October 2004 laying down minimum provisions on the constituent elements of criminal acts and penalties in the field of illicit drug trafficking, as amended by DIRECTIVE (EU) 2017/2103 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15

1 English name: Early Warning System on NPS. The abbreviation EWS is commonly used. In this publication we use the Polish abbreviation: SWO – System Wczesnego Ostrzegania.

November 2017 amending Framework Decision 2004/757/JHA in order to include new psychoactive substances in the definition of drug and repealing Council Decision 2005/387/JHA.

New psychoactive substances, as defined in the above legal acts, are substances of natural or synthetic origin that are not precursors and are not listed in any of the annexes to the United Nations Single Convention on Narcotic Drugs of 1961 and United Nations Convention on Psychotropic Substances of 1971); however, they pose a similar threat to public health as the substances listed in these annexes (specifically in Annexes I, II, or IV of the 1961 Convention and Annexes I, II, III, or IV of the 1971 Convention).

The described mechanism consists of three stages: 1) information exchange/early warning, 2) risk assessment and 3) decision on substance control (EMCDDA, 2019). It is worth taking a closer look at each of these stages:

- Information exchange/early warning

This stage is crucial and provides the foundations for the entire mechanism. Its goal is to ensure fast and efficient exchange of information on NPS between EU Member States and EU institutions, monitoring new substances on the European market, building and strengthening awareness as well as preparing responses to threats resulting from new psychoactive substances at both the European and national levels (EMCDDA, 2018). The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) plays a key role at this stage. It is responsible for coordinating and collecting data on the identification of new psychoactive substances. Information is collected through a network of national focal points (known as REITOX Focal Points) in 27 EU Member States as well as in Turkey and Norway. Data are obtained from networks of forensic and toxicological laboratories in each country. Analysed samples come from drug seizures, substance testing programmes, analyses of poisoning cases, analyses of biological fluids of drivers suspected of driving under the influence of psychoactive substances or post-mortems. In the event of identifying an NPS, the analysis results are sent via a national focal point to the EMCDDA. After analyzing the submitted analytical documentation and supplementing it with available literature data, the EMCDDA sends relevant information to all national focal points. The exchange of information on these substances is mandatory. The system enables national focal points and EMCDDA to quickly receive information about NPS emerging in Europe and any associated risks. This is precisely the key element of the Early Warning System on New Psychoactive Substances (EWS). From the moment a substance is identified, the EMCDDA actively monitors it for any information on harms associated with its use. Based on information reported to the EWS, if the EMCDDA

concludes that a particular new psychoactive substance may pose a risk to health or society at the EU level, it decides to prepare an initial report on that substance. From that moment on, data are collected from national focal points, Europol and the European Medicines Agency (EMA) for a period of two weeks. Based on the information gathered, a preliminary report is produced within five weeks of initiating the procedure. It contains a preliminary analysis of the available data on the substance, including its chemical structure, information on its use in industry, veterinary medicine and healthcare, information on incidents indicating health and social problems associated with the use of the substance, any restrictions on the trade in the substance in Member States and the involvement of organized crime groups the substance trafficking. Based on the preliminary report, the European Commission (EC) decides within two weeks whether to initiate a risk assessment procedure.

- Risk assessment

Risk assessment is performed by the EMCDDA's Scientific Committee, which is composed of leading European scientists. The team has an interdisciplinary character and includes representatives from social and natural sciences. The assessment covers categories such as addiction and potential for substance abuse, prevalence of use, health risks associated with substance use, social risks associated with substance use and involvement of organized crime in substance trafficking. Based on expert assessment, preliminary reports and all available data, a risk assessment report is produced and sent to the European Commission (EC). The report is created within 6 weeks as of the EC's decision.

- Decision to control a substance

Based on the risk assessment report, the European Commission may decide to subject a substance to control through the so-called delegated act. The act is transmitted to the Council of the European Union and European Parliament. If both institutions do not object, the delegated act enters into force within two months. After the decision is published, Member States have 6 months to control the substance under national regulations.

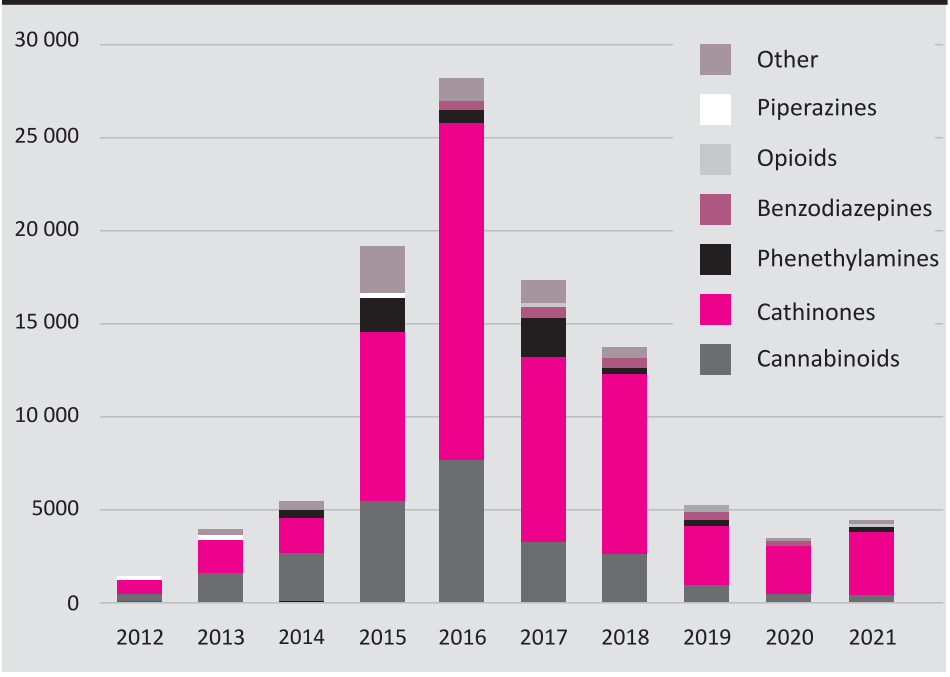
4.1. Data analysis of NPS identifications in Poland

The analyses herein are based on data from the Polish Early Warning System on New Psychoactive Substances (SWO). They come from annual reports on the number and quantity of analysed new psychoactive substances in laboratories

that are part of SWO such as the Central Customs Laboratory, Central Forensic Laboratory of the Police, Institute of Forensic Research in Krakow, National Institute of Medicines, Internal Security Agency, Main Sanitary Inspectorate and Central Laboratory of the Border Guard. However, these data have their limitations, which must be taken into account. Firstly, they do not present the whole picture of NPS seized in Poland, but only collective information regarding the number and quantity of substances sent for analysis. The definition of a case is also ambiguous. Some laboratories have access to information about all NPS seized, while others have access only to the amount of material sent for analysis. Despite this, they are currently the only relatively comprehensive data available and reflect well the dynamic changes occurring on the domestic NPS market.

Analysing the number of substances identified in laboratories in Poland, the NPS trend dynamics in the years 2012-2016 are clearly visible (Figure 4.1). The number of NPS identifications increased from about 1 300 in 2012 to over 28 000 in 2016. Then, in the years 2017-2020, this number decreased steadily and dramatically. In 2021, there was a slight increase to 4 339 cases.

Figure 4.1. NPS identifications by substance groups in years 2012-2021

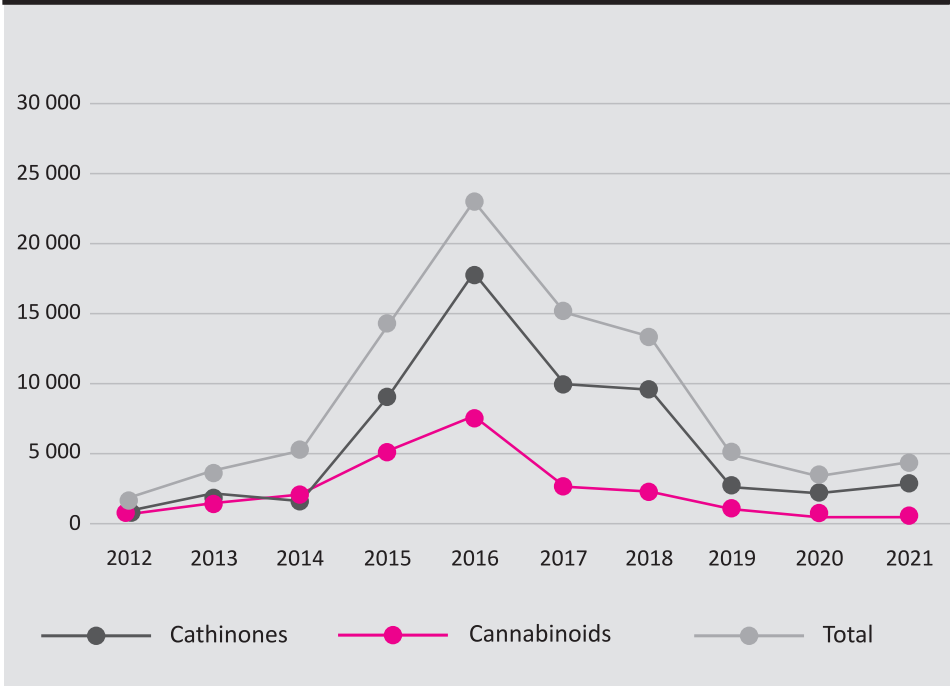


Source: NFP-EWS – own calculations

4.2 Synthetic cathinones and Synthetic cathinons

As the data shows, the Polish market has been practically dominated by two groups of substances since the beginning of the analysis: synthetic cathinones[1] and synthetic cannabinoids[2]. While in the early years the number of identified synthetic cannabinoids and synthetic cathinones remained at a similar level, since 2015 there has been a gradual increase in synthetic cathinones (Figure 4.2). Currently, synthetic cathinones account for 75% of all new psychoactive substances identified in Poland.

Figure 4.2 NPS identifications by synthetic cathinones and synthetic cannabinoids in years 2012-2021



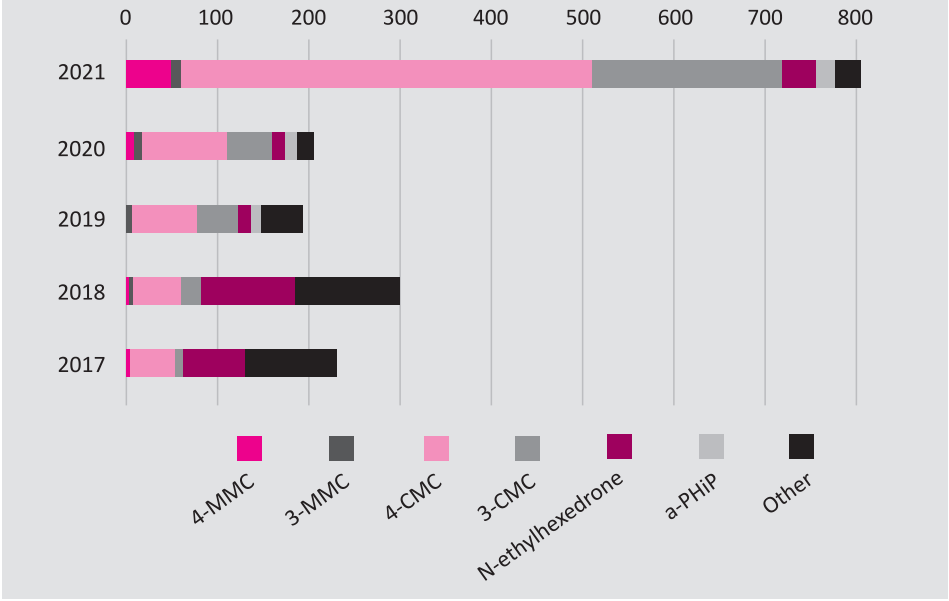
Source: NFP-EWS – own calculations

The above analyses indicate a relatively stable situation on the NPS market. However, a different picture of the phenomenon emerges when analyzing the weight of confiscated substances. Figure 4.3 shows the weight of seized cathinones from 2017 to 2021.

1 Cathinone derivatives of stimulating and empathogenic properties.
2 Synthetic substances acting on cannabinoid receptors (similarly to THC found inn cannabis).

The data analysis indicates that the quantity of seized cathinones remained at a high level and has significantly increased in the last year. In the years 2017-2020, the quantity of seized cathinones oscillated around 200 kg. The exception was in 2018, when the quantity of seized cathinones reached 300 kg. The increase in 2018 can be explained by decisive police actions targeted on the NPS market after the amendment of the law. The highest rates were recorded in 2021, when the quantity of seized cathinones reached as much as 800 kg. Cathinone seizures in Poland are among the largest in Europe. Interpreting this data, it should be noted that in 2018, the police were given the powers and legal tools to prosecute such crimes and in the following years they used them extensively.

Figure 4.3. Quantity of seized synthetic cathinones in years 2017-2021 (kg).

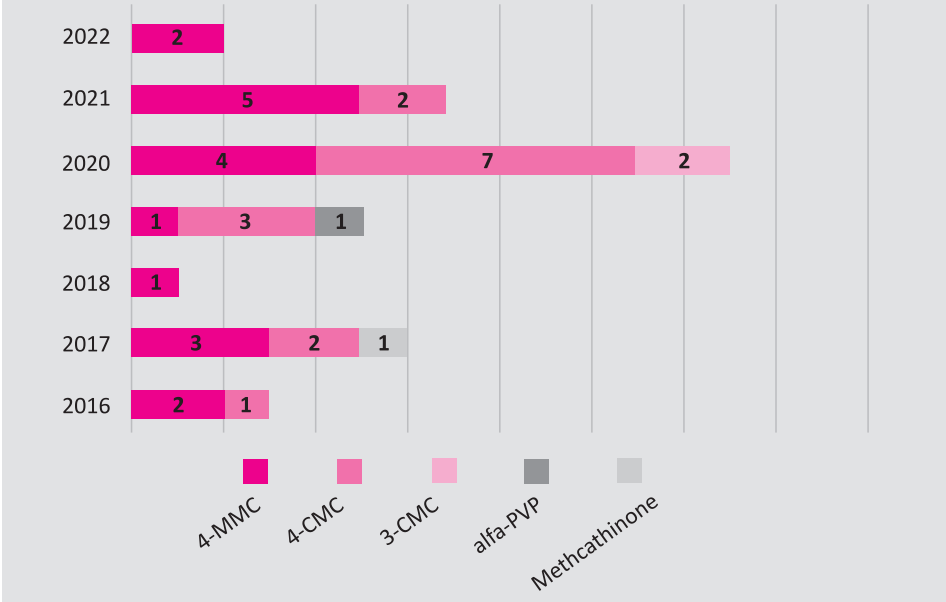


Source: NFP-EWS – own calculations

An analysis by substances provides interesting information as well. As can be seen in Figure 4.3, the most frequently seized substances, especially in recent years, are 4-CMC, 3-CMC and 4-MMC (mephedrone). Why does the structure of the volume of seized cathinones look like this? There are clues that suggest that after the NPS production and trafficking were criminalized and sanctioned more or less organized criminal groups most likely took over

the production of these substances. Some explanation for this situation is provided by data from the police and information obtained from police experts who prosecute drug manufacture and dismantle clandestine laboratories. Police data indicate that in recent years the number of laboratories producing cathinones has significantly increased. Additionally, several large-scale laboratories producing cathinones have been closed. Often, several kilograms of the substance were produced within one synthesis process (Wojtkielewicz, 2022) (Figure 4.4).

Figure 4.4 **Dismantled clandestine laboratories manufacturing synthetic cathinones in years 2016-2022**



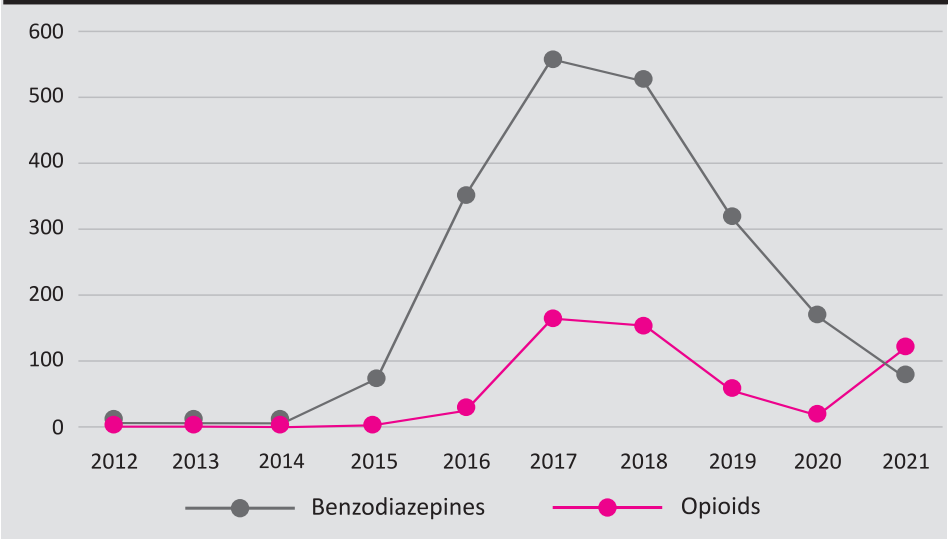
*Data provided solely by the Criminal Department of the Police Headquarters

The dismantled laboratories mainly produced 4-CMC, 3-CMC and 4-MMC (mephedrone), which are substances with a similar chemical structure. Police experts point out that all of the mentioned substances can be produced using almost identical chemical processes in the same laboratories. Depending on the type of bromoketone used, any of the above substances can be obtained. This would explain the high volumes of seized cathinones, despite the relatively low number of identified cases. Additionally, analyzing the seizures, it can be noticed that most of the specific substances prevalent on the market are listed as controlled substances. It also happens that substances that were banned many years ago return to the market such as 4-MMC (mephedrone).

4.3. Benzodiazepines and opioids

Apart from synthetic cathinones and synthetic cannabinoids, there are two other groups of substances that are much less common but significant from the perspective of assessing the risk associated with the NPS market. These are new benzodiazepines1 and synthetic opioids2. Due to their mechanism of action, these substances can pose a significant risk to public health. Often, substances from these two groups are far more potent and produce effects in smaller doses compared to their originals. This makes them easy to overdose. Analyzing the trends in their occurrence, it can be observed that they have a completely different dynamic compared to the previously discussed groups (Figure 4.5).

Figure 4.5. NPS identifications by benzodiazepines and opioids



Source: NFP-EWS – own calculations

Substances from these two groups were practically non-existent on the market before 2014 (Figure 4.5). Benzodiazepines emerged around 2015. The number of identifications of this substance in laboratories systematically increased reaching over 500 cases in 2017 and 2018 and subsequently dropped to 94 cases in 2021. Synthetic opioids appeared later and in 2017-

1 Substances with a chemical structure and mechanism of action similar to benzodiazepines used in medicine but often more potent.
2 Synthetic substances that bind to opioid receptors, often characterized by higher activity even at low doses compared to known opioids such as heroin.

2018 their number hovered around over 150 cases. In 2020, the number of these substances on the market dropped to 23 cases and in 2021 it increased to 121 cases, with tramadol (58) and etazen (51) being the most prevalent. However, in the context of other groups of substances, especially cannabinoids and cathinones, these numbers remain low.

5. International situation of NPS

An important element of the Polish government's response to the threats posed by NPS has been the actions taken at the international level. During the preparations for the Polish presidency of the European Union in 2011, and during its implementation, the Polish government attached particular importance to the broadly understood health issues, including public health and the use and abuse of psychoactive substances. Standard measures taken at the EU and national level in response to the problem of new psychoactive substances proved to be insufficient in the face of the scale of the threat observed in our country as well as in several other European countries such as the United Kingdom or Ireland. At the same time, significant differences in the assessment of the NPS problem could be observed within the European Union. In Poland, decisive actions were taken to combat NPS. As a result of the decision of the Chief Sanitary Inspector and police operation in 2010, all NPS sales outlets were closed. As a result of these actions, the number of NPS-related poisonings significantly decreased in 2011 and 2012. However, in the era of globalization, open borders and free movement of people and goods (e.g. within the EU), no country can independently solve all the problems that arise within its borders. Therefore, at the initiative of the Polish government, issues related to NPS were raised at the European Union forum and a process of in-depth analysis of both the phenomenon itself and ways to respond to it was initiated. Poland considered conducting research on „new drugs" and implementing effective tools and methods to counter the problems generated by the appearance of these drugs to be one of the highlight during its presidency in 2011. For this reason, representatives of our country actively supported the process of evaluating Council Decision 2005/387/JHA of 10 May 2005 on the exchange of information, risk assessment and control of new psychoactive substances initiated by the European Commission. During the Polish presidency of the Council of the European Union, work was initiated on the adoption of the European Pact against synthetic drugs. Editing work on the Pact began in April 2011 with the participation of interested Member States, the European Commission, General Secretariat of the Council and Europol. As

a result of these actions, the Pact started to be implemented. Part III of the Pact was devoted to the issue of new drugs, in which a common EU approach to the problem of „legal highs" was defined as a response to the phenomenon of new NPS distribution patterns.

The Pact aims to guide the European Union's actions in the following areas:

- countering production of synthetic drugs,
- countering trafficking in synthetic drugs and precursors,
- tackling new psychoactive substances,
- training for law enforcement services in detecting, examining and dismantling clandestine laboratories.

Additionally, during the Polish presidency of the Council of the European Union, issues related to NPS were discussed at the session of the Horizontal Drugs Group (HDG) in Brussels and, to a limited extent, at the COSI committee level. When analyzing the response to the NPS problem, attention should be paid to the different legal systems in various countries that provide the framework for actions taken and determine the speed of response to new phenomena. The Polish legal system, which relied on adding substances to the list as an appendix to the law, was based on individual law. This situation changed in 2018 when solutions based on generic law were introduced. Polish experiences in combating NPS were presented in many European cities at conferences and expert meetings, including Amsterdam, Lisbon, London, Brussels, Frankfurt, Rome, Budapest as well as outside the EU in places such as Palm Springs, Sydney and Brasilia.

5.1. International conferences in Poland

As part of the ongoing international cooperation, the Information Centre on Drugs and Drug Addiction (currently Department of Research, Monitoring and International Cooperation, Polish REITOX Focal Point) of the National Bureau for Drug Prevention (currently National Centre for the Prevention of Addictions) organized, in collaboration with the Hungarian Focal Point and EMCDDA, an international conference on NPS titled „Reitox Academy on New Psychoactive Substances". The event took place in Warsaw in early September 2014 and was a follow-up of the first expert conference in 2012 in Budapest. Experts from over 20 countries, primarily from the European Union but also from Norway, Macedonia, Serbia, and Georgia, participated in the conference. Over the course of two days, 25 presentations on various

aspects of the NPS problem and ways to respond to it were given by speakers from over 10 countries. Additionally, Poland, along with France (project leader), the Netherlands, the United Kingdom and Czechia, participated in an EU commission-funded international project called „I-TREND"[12]. The aim of the project was to develop tools for online research into NPS by means of quantitative and qualitative methods. The University of SWPS represented Poland in the project and was responsible for the quantitative component (online research). The research was also aimed at identifying the top 10 NPS and create folders containing useful information for practitioners in the field of prevention or treatment. In 2013, the TOP-10, developed based on laboratory data, included the following substances: 3,4-DMMC; 3-MMC; AM-2201; Brephedrone; Ethcathinone; MDPBP; Pentedrone; alpha PVP; UR-144; pMPPP.

In September 2015 in Krakow, the National Bureau for Drug Prevention organized an international conference aimed at developing international cooperation in the area of combating new psychoactive substances (NPS) with the participation of the Baltic states, Georgia and EMCDDA. Experts who deal with the problem of new psychoactive substances, representing various institutions such as national monitoring centres, non-governmental organizations, research centres or the police took part in this event. It is worth emphasizing that during the conference the results of the work of many Polish institutions and organizations collaborating with the National Bureau for Drug Prevention (KBPN) on the issue of NPS were presented.

One of the primary objectives of the Krakow event was to review tools used for monitoring drugs and drug addiction in terms of their effectiveness in gathering data on the epidemiological situation associated with new psychoactive substances. The conference featured a presentation of the Polish experiences regarding the use of surveys in the general population and youth to monitor the prevalence of NPS use. Additionally, a representative from the EMCDDA presented tools used for data collection and reporting in the area of the five key EMCDDA indicators.

In 2016, activities continued on the international forum in collaboration with the Provincial Drug Information of Wielkopolskie Province. The National Bureau for Drug Prevention and Marshal's Office of Wielkopolskie Province, in cooperation with the EMCDDA, organized an international conference on new psychoactive substances, also known as „legal highs". The conference took place on October 26-27 in the city of Poznan and included experts from several countries such as Poland, Portugal, Italy, Germany, France, Ireland, Norway, Latvia, Lithuania, Estonia, Czechia and Romania as well as European Commission. During the event, the latest research and results

of the monitoring on new psychoactive substances were presented. As part of the conference, the findings of the I-TREND project[1] funded by the European Commission were also presented. The project, led by the French Monitoring Center (OFDT), had been carried out in Poland, France, Czechia, the Netherlands and the United Kingdom. In Poland, it was coordinated by the SWPS University. The key topics presented during the conference in Poznan focused on the Early Warning System, epidemiological situation of NPS, NPS users, NSP market, legal aspects and supply reduction. Nearly 70 people from various institutions, such as universities, central institutions, EMCDDA Focal Points (Monitoring Centres), non-governmental organizations, laboratories, Police, Customs Service, Sanitary Inspection and provincial drug information experts participated in the conference. One of the sessions was devoted to the situation in the province of Wielkopolskie.

The conference described above is an example of good cooperation between the National Bureau for Drug Prevention and the network of Provincial Drug Information Experts, which had been established in 2001. Several conclusions can be drawn from the presentations and discussions held at the Poznan conference:

- The epidemiological situation regarding new psychoactive substances varies among countries. NPS are relatively rarely used in Germany and Lithuania, in contrast to countries such as Poland or Hungary. The patterns of NPS use also differ in each country - in Latvia, synthetic cannabinoids (smoked) are predominant, while in Romania, the injection of synthetic cathinones is more common.
- The role of online and darknet sales of NPS is increasing.
- NPS users have little knowledge about the substances they consume, which can result in overdoses and deaths.
- The analysis of NPS requires cooperation between laboratories in order to exchange information about these substances.
- A major challenge is assessing the risk of NPS because the market is seeing new NPS, often with insufficient information available.
- Since the criminalization of NPS in Poland in July 2015, new substances have appeared on the market.
- Introduction of new legal solutions in some countries (e.g. in Latvia in 2014 and UK in 2015) led to the closure of brick-and-mortar shops. However, it should be emphasized that there is no single legal model that would be uniformly effective in all countries.

1 Polish website of the project: https://www.i-trend.eu

- The current system for monitoring drugs and drug addiction is not adequately suitable for monitoring NPS. There is a need to develop qualitative research methods and take into account the online market more widely.
- Monitoring and counteracting NPS require international cooperation, as demonstrated by the projects presented at the conference: I-TREND (OFDT France) and EPS NPS Project (RISSC Italy).

5.2 Situation in the Western Hemisphere

The NPS problem is not only a challenge for the drug services and drug market control system in Europe. An expert from the National Bureau for Drug Prevention (KBPN) was invited to present Polish experiences in the area of counteracting NPS at a conference of Western Hemisphere countries organized by the United Nations. The second regional conference on new psychoactive substances for Western Hemisphere countries took place in Brasilia on 15-17 May 2018. The conference was organized by the United Nations Office on Drugs and Crime (UNODC) with the participation of other international organizations such as OAS/SICAD22, Interpol and WHO. Apart from experts from both Americas the event was attended by specialists from Japan, South Korea, Great Britain and Poland. During the three-day meeting, issues related to the detection of NPS, Early Warning System and legal solutions were discussed. The role of access to lab analysis standards of newly detected substances was emphasized during the discussions. The use of these standards for analysis is one of the elements of effective actions in the field of NPS.

During the conference, it was concluded that law enforcement agencies involved in combating drug-related crime should be equipped with tests for the rapid detection of NPS. The UNODC prepared guidelines about how to apply the standards and described methods of producing substances under the control of international conventions. The discussion held during the conference showed that different approaches to control are being applied in countries throughout the Americas ranging from individual law to generic law. Some countries have limited resources such as a lack of experts to address NPS-related issues on a permanent basis. The Brasilia conference participants suggested that steps should be taken to create a regional database that would allow for the exchange of information on NPS. One of the proposals was the idea of reviewing best practices in the area of legislative solutions for combating NPS. It is worth noting that the exchange of information and the operation of the Early Warning System may relate to different areas and goals

in the respective countries. For example, in the Bahamas, the main challenge is drug trafficking and the Early Warning System will be mainly focused on the smuggling of drugs (Malczewski, 2018). In Colombia, it may be a matter of new coca plantations, while in Argentina, the challenge might be new patterns of the use of NPS or drugs. Therefore, Early Warning Systems on new drugs in Western Hemisphere countries should cover not only NPS but also new threats or patterns of drug use that pose a challenge to public health. Regional and local cooperation can help solve problems related to counteracting NPS such as a lack of experts, lack of standards needed to detect NPS as well as limited resources and tools. Conducting evidence-based actions in the area of NPS control requires cooperation with scientists and laboratories. Therefore, it seems that various forms of cooperation are necessary to implement effective actions to reduce the supply of NPS. Moreover, demand reduction measures related to education, prevention and treatment also play an important role (Malczewski, 2018).

5.3. NPS in Central Eastern European countries

It is also worth examining the situation related to new psychoactive substances in three EU countries that border Poland (Lithuania, Slovakia and Czechia), particularly with reference to the situation in the years 2015-2016 when Poland saw a record number of poisonings.

a) Lithuania

The ESPAD surveys show that the prevalence of NPS use in Lithuania is similar to the European average (5.4% in Lithuania, 4.0% in the EU) (ESPAD Report, 2015, 2016). The Flash Eurobarometer 401 survey conducted among individuals aged 15-24 found that the use of new psychoactive substances was above the EU average: 5% in Lithuania (EU average was 3%; data from 2014) (Young People and Drugs..., 2014). According to the Early Warning System data, in 2016, 439 seizures of new psychoactive substances were reported. It is worth mentioning that in 2016, the inter-ministerial working group responsible for assessing the risk of new psychoactive substances evaluated 86 substances for potential legal control. As a result of their work, 48 psychoactive substances were brought under generic control in 2016 (Lithuania, interview, 2018). Additionally, in the same year, Lithuania recorded 433 seizures of new psychoactive substances, which was significantly higher than the 62 cases reported in 2015 (Early Warning System Database of EMCDDA, 2018). According to experts from Lithuania, new psychoactive substances do not

pose a major problem, mainly due to their limited prevalence of use and the relatively small scale of problems associated with this phenomenon. Lithuania also did not have a large market for these substances (Lithuania, interview 1, 2018; Lithuania, interview 2, 2018). However, the latest data from Lithuania regarding the COVID-19 pandemic demonstrate an increased number of seized NPS.

b) Slovakia

In a survey conducted in 2016 in Slovakia, which included individuals aged 15-64, 0.6% of the respondents stated that they had used new psychoactive substances in their lifetime. Men aged 15-34 reported using new psychoactive substances significantly more often (0.7% for men and 0.1% for women) (Psichoaktyviųjų Medžiagų Vartojimo..., 2017). However, according to a nationwide survey conducted in 2015, less than 1% of adults aged 15-64 had ever used any new psychoactive substance. 0.4% of the participants admitted to using synthetic cannabinoids and 0.3% mentioned synthetic cathinones (Country Report on Drug Situation Slovakia, 2016). The findings of the Flash Eurobarometer 401 survey from 2014 indicate that the use of new psychoactive substances in Slovakia is above the EU average. In 2014, the rate was 10% in Slovakia compared to the EU average of 8% (Young People and Drugs..., 2014). Similar results were obtained in a school survey where 8% of the surveyed students aged 16 reported ever using NPS (4.0% for both genders), which is higher than the overall average of 3.9% for the entire study (ESPAD Report 2015, 2016).

The results of the aforementioned studies on new psychoactive substances (NPS) complement the research among university students from 2013. In a representative sample of students aged 19-25 (N=1065), it was noted that 2.9% of the participants had ever used synthetic cannabinoids while in the case of synthetic cathinones (mephedrone and/or MDPV) it was 0.5% of the respondents (Nociar, 2014). In 2016, the first industrial production of NPS was discovered in Slovakia. An organized group of Polish nationals was reported to have started preparations for the production of 3-CMC (Slovakia Drug Market and Crime Workbook, 2017). Information about NPS is also provided by municipal wastewater studies, in which samples were collected from nine Slovakian cities over a two-year period (2017-2018) as well as during three music festivals. Approximately 20% of the Slovakian population and 50 000 festival participants took part in the study. During the two festivals, 30 NPS were searched for in the wastewater. Metabolites of five NPS of the synthetic cathinones class (mephedrone, methcathinone, butylone, pentylone) and

phenethylamine (25-iP-NBoMe) were detected at low concentrations (Brandeburovaal et al., 2020). Other studies indicate that NPS use is primarily observed among poorer and less educated groups in the southern parts of Slovakia (Slovakia Interview, 2021).

c) Czechia

The highest prevalence of NPS use was recorded in Czechia in the years 2010-2011, when the country had approximately 20 and 50 shops, respectively. This was mainly due to the closure of shops in Poland, which led to their opening in Czechia, also for the Polish customers. Similarly to Poland, the highest prevalence of NPS use was observed among clients of harm reduction programmes. According to a 2013 survey, out of 1 797 clients of such programmes, 11% reported using new psychoactive substances (Grohmannova, 2013). In 2014, synthetic cathinones were the most popular group of NPS. According to the TOP-10 I-TREND project, they were 3-MMC, 4-FA (4-Fluoroamphetamine), 4-MEC, 6-APB, AMT, bk-MDMA (methylone), ethcathinone (ETH-CAT), MDPBP, methoxetamine (MXE), MPPP, and pentedrone (Jabłońska et al., 2017). Brick-and-mortar stores in Czechia were closed, but NPS remained available online. In May 2014, there were 30 active online shops selling NPS in Czechia (Martinez et al., 2016). According to the I-TREND study conducted in five countries[1] between 2014 and 2015, synthetic cannabinoids were the most expensive in Czech online stores (Brunt et al., 2017).

The Flash Eurobarometer 401 study conducted on a representative group of individuals aged 15-24 in Czechia shows that NPS use is below the EU average. In 2014, the prevalence rate was 4%, while the EU average was 8% (Young People and Drugs..., 2014). However, in the 2015 ESPAD study, 6.52% of the respondents reported using NPS (6.0% of boys and 7.0% of girls). This result is above the overall study average of 4.0%. It is worth noting that none of the students reported using NPS in the past 12 months prior to the survey (ESPAD Report 2015, 2016).

According to a nationwide study conducted in 2016 among individuals aged 15-64, NPS use was reported by 0.9% of the participants, indicating a low prevalence of NPS use in Czechia. However, a study focusing on health and psychoactive substance use among the Romani population in 2017 (n=546) showed higher NPS use in certain groups within the Czech population, such as the Roma community. Approximately 5.7% of the surveyed population had used NPS at some point in their lives (9.9% of men and 1.5% of women).

1 This survey was conducted in Czechia, Poland, Great Britain, France and Holland.

Compared to the prevalence of NPS use in the general population aged 15-64, NPS use within the Romani community was approximately five times as high (Czech Republic Drugs Workbook, 2017). The Early Warning System listed 95 NPS which were detected in 2016, indicating a significant increase compared to the 35 NPS detected in 2015 (Early Warning System Database of EMCDDA, 2018).

5.4. Situation in Europe according to the EMCDDA report

According to EMCDDA data, nearly 7 tons of NPS were seized in 2020. It must be stressed that the production and export restrictions imposed by China had an impact on the European NPS market. Until 2021, China had been one of the main countries from which NPS were imported into the European market. The 2020 seizures demonstrate the adaptation of the NPS market to these changes, as they were predominantly low-quantity seizures of synthetic cathinones; however, smuggled mainly from India on a large scale. Furthermore, since 2015, at least 52 NPS clandestine laboratories have been detected in Europe. In 2019, China also introduced control measures for fentanyl derivatives. In the following years (2020-2021), no new fentanyl derivatives were detected in Europe; however, according to the EMCDDA report, 15 new synthetic opioids emerged that do not belong to the fentanyl group.

The EMCDDA report reveals an alarming trend regarding the growing overlap between the traditional drug market and NPS market. As an example, there have been cases of adulterated low-THC cannabis products, powdered substances containing synthetic cannabinoids, counterfeit medications such as oxycodone tablets containing potent benzimidazole opioid as well as counterfeit Xanax and diazepam tablets containing new benzodiazepines. These developments mean that users may unknowingly be exposed to the effects of potent substances, which might raise the risk of both fatal and non-fatal overdose incidents.

At the end of 2021, the EMCDDA was monitoring around 880 NPS, of which 52 were reported for the first time in Europe in 2021, which constituted an increase compared to 2020 (46 NPS). In 2020, approximately 370 previously reported new psychoactive substances were detected in the market. Additionally, in 2020, EU Member States accounted for 21 230 out of 41 100 seizures of new psychoactive substances reported in the European Union, Turkey and Norway, which accounted for 5.1 out of 6.9 tons of confiscated substances. In 2020, EU Member States reported 6 300 seizures, out of which 236 kg involved material containing synthetic cannabinoids. Synthetic

cathinones accounted for 65% of the confiscated material in 2020 (3.3 tons), with N-ethylhexedrone constituting one-third of it and 3-MMC and 3-CMC each making up a quarter. Both 3-MMC and 3-CMC underwent risk assessment in 2021 and were subsequently subjected to control measures in the European Union. Since 2008, 224 new synthetic cannabinoids have been detected in the European drug market, with 15 of them reported for the first time in 2021. In 2020, the substance 3-MMC was identified in 38 cases of acute drug poisonings in five hospitals participating in the Euro-DEN Plus project. The EMCDDA report also notes that the analysis of 1 166 used syringes collected by the ESCAPE network in seven European cities in 2020 revealed that synthetic cathinones were present in over half of all the syringes analysed in Budapest and Paris (EMCDDA, 2022).

6. Polish youth, drugs and new psychoactive substances

For nearly 20 years CBOS Foundation in collaboration with the National Centre for the Prevention of Addictions has conducted population surveys. The 2021 results discussed in this chapter were based on a randomly selected nationwide sample (sampling frame – Educational Information System) of all types of full time secondary schools (secondary schools of general education, technical secondary schools, vocational schools). The random surveys were conducted in October and November 2021 (n=1531) among the final grades of secondary schools. The surveyed students were predominantly aged 18-19. The 2021 results are presented in comparison to the previous measurements.

6.1 Availability of drugs

This edition of the survey featured questions about the perceived availability of drugs. The respondents were asked about the places where drugs could be purchases, drug purchase offers, drug dealing at school and whether they considered it difficult to get supplies of the respective psychoactive substances. In 1994 every fifth respondents (22%) from whom and where drugs could be purchased while in 2003 this figure rose to almost a half of the respondents (49%). However, since that time the number of students aware of the places to buy drugs and people selling them has been falling. In 2016, the percentage stood at 31% - the lowest rate since 1999. The results of the latest survey of 2021 showed a further rise in the percentage of students (53%) who have no knowledge of where to buy drugs. This is the highest figure recorded since 1994.

Table 6.1. Do you know where drugs can be bought?

	IV '94	IV '96	XII '99	XII '03	X '08	XI '10	XI '13	XI '16	XI '18	X '21
	in %									
I know of several places, several people	17	21	37	44	31	30	28	26	25	22
I know of one such place, one such person	5	7	6	5	4	5	5	5	5	6
I don't know but I could easily find out	23	28	24	26	25	27	26	22	30	19
I don't know where nor from whom	55	44	33	24	40	38	41	47	48	53

Source: CBOS statutory surveys: 1994, 1996; IPiN survey of 1999; KBPN surveys: 2003–2021

It is worth stressing that the respondents' answers might have been influenced by various factors such as media reports of police actions against drug-related crime, especially cracking down on drug dealers. A more useful indicator to describe the drug market in terms of the availability of illegal psychoactive substances is the question about offers to buy drugs.

From 1994 the number of students who had been offered drugs rose steadily to reach its peak in 2003 when almost half of the respondents (47%) were offered to buy drugs. Since then the percentage of respondents who had been offered drugs started to fall (in 2013 it was 32%). After a slight rise in 2016 (36%) the subsequent measurements of 2018 and 2021 revealed a downward trend (34% and 32% respectively).

Table 6.2. Have you ever been offered to buy drugs?

	IV '94	IV '96	XII '99	XII '03	X '08	XI '10	XI '13	XI '16	XI '18	X '21
	in %									
Yes, many times	6	8	12	14	7	6	5	7	7	5
Yes, a few times	12	18	24	26	21	18	19	21	18	17
Yes, once	6	6	9	7	8	9	8	8	9	10
Yes, never	76	68	55	52	64	67	67	64	65	68

Source: CBOS statutory surveys: 1994, 1996; IPiN survey of 1999; KBPN surveys: 2003–2021

In addition, the students who had been offered to use psychoactive substances were asked to name them. In the last 12 months prior to the latest survey, the most students had been offered alcoholic beverages, especially beer (82%) (85% in 2018). It is worth noting that the student respondents who took part in the survey were mostly of legal age. Cannabis (marijuana or hashish) was the most frequently offered illegal substance (35%). In the latest survey, no increase was recorded of the percentage of respondents who had been offered to use psychoactive substances. Only in the case of some substances out of the total of 15 the percentage held steady (sedatives and hypnotics, cocaine/crack, hallucinogenic substances, poppers). In the case of new psychoactive substances the percentages was the lowest since the onset of such measurements i.e. 2010. In 2010, 16% of the respondents were offered new psychoactive substances while in 2021 it was only 2%.

Table 6.3 **In the last 12 months, have you been offered any of the following substances, regardless whether you accepted the offer or not?**

Psychoactive substances	2010		2013		2016		2018		2021	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
	in %									
Beer	92	8	90	10	88	12	85	14	82	17
Vodka	87	13	86	14	82	18	79	20	76	24
Wine	70	29	75	25	75	25	74	25	71	28
Marijuana, hashish	34	65	40	60	37	63	37	61	35	65
New psychoactive substances	16	84	5	95	3	97	4	95	2	97
Amphetamine	9	90	9	91	7	93	8	91	6	93
Ecstasy	6	94	4	96	5	96	7	92	4	95
Sedatives and hypnotics	5	95	5	95	4	96	6	93	6	93
Cocaine	5	95	3	97	4	97	4	94	4	96
Crack	3	97								
Sterydy anaboliczne	4	96	3	97	3	97	3	96	1	98
LSD or other hallucinogenic substances	4	96	5	95	5	95	6	92	6	94
Hallucinogenic mushrooms	5	95								

Poppers	2	97	2	98	2	98	2	97	2	97
Heroin	2	97	2	98	2	99	3	96	2	97
Polish homemade heroin (kompot)	2	98	2	98	1	99	2	97	1	98
Dextromethorphan	2	98	1	99	2	99	2	97	1	98

Source: KBPN surveys.

Tabela 6.4. In your opinion, how difficult would it be for you to obtain any of the following substances if you wanted to?

	2016				2018				2021			
	Impossible	Difficult	Easy	I don't know	Impossible	Difficult	Easy	I don't know	Impossible	Difficult	Easy	I don't know
	w procentach											
Cigarettes	3	2	94	2	5	2	88	4	5	2	88	4
Beer	2	1	95	2	4	1	90	3	4	1	90	4
Wine	2	1	95	2	4	1	90	3	4	1	89	4
Vodka	2	2	94	2	5	1	89	3	5	2	88	4
Sedatives and hypnotics	19	22	35	24	24	21	36	20	23	20	32	23
Marijuana, hashish	13	24	47	16	15	25	44	15	15	23	44	17
Amphetamine	25	31	16	28	27	31	16	24	29	31	13	27
LSD or another hallucinogenic drug	24	34	13	28	27	32	14	25	27	30	15	27
Anabolic steroids	28	29	12	31	31	30	11	28	34	27	10	28
Ecstasy	28	31	11	30	31	28	14	27	33	26	13	27
Cocaine	29	31	11	29	31	31	11	27	32	28	11	27
Crack												
Heroin	30	31	8	30	32	31	9	27	34	29	8	27
Polish homemade heroin (kompot)	30	30	7	32	33	29	8	29	35	28	7	30
New psychoactive substances	27	29	15	29	31	28	13	27	35	27	7	29
Poppers	32	28	6	34	34	28	7	31	35	26	7	31
Dextromethorphan (DXM)	31	30	6	33	33	29	7	30	35	27	7	30

Source: KBPN surveys.

While reviewing the answers of the respondents who perceived psychoactive substances other than alcoholic beverages and cigarettes as impossible to get, it must be noted that such answers fell within the 15-35% bracket (latest measurement data). The number of students who considered it difficult to obtain most of the listed psychoactive substances stood at 20-29%. Cannabis was considered the easiest illegal substance to obtain (44% of the respondents considered it easy to get hold of cannabis). It is worth noting a fall in the perceived availability of new psychoactive substances. Fewer respondents considered it easy to get NPS supplies (fall from 13% in 2018 to 7% in 2021). In the case of new psychoactive substances we are observing a decrease in the number of respondents who perceive the NPS availability as easy. In 2016, 15% of the respondents answered that it was easy to obtain new psychoactive substances while in 2021 it was only 7%.

6.2 Drug use prevalence

The students were asked about their own experiences related to using drugs. In the case of positive answers, they were subsequently asked to name the substances. In 2008, the students were expected to check the substances they used, which also included new psychoactive substances. The students also reported whether they had used psychoactive substances in the last 30 days (current use), last 12 months (recent use) and ever in their lifetime (lifetime prevalence), which is also the indicator of experimenting with drugs. This way of asking questions allows for the accurate determination of the drug use prevalence. Moreover, by listing the respective substances in the questionnaire, the term 'drugs' was defined. Comparing answers to both questions constitutes material for in-depth analyses. In the case of the question containing the list of

Table 6.5. In the last 12 months, have you used narcotic drugs?

	IV '92	IV '94	IV '96	XII '99	XII '03	X '08	XI '10	XI '13	XI '16	XI '18	X '21
	in %										
Yes	5	10	10	18	24	15	16	18	17	16	13
No	95	90	90	82	76	85	84	82	82	83	87

Source: CBOS statutory surveys: 1992, 1994, 1996; IPiN survey of 1999; KBPN surveys: 2003–2021

the substances, the percentages of the students who reported using drugs are higher compared to the question in which the students were asked to name any drug they had used. The reason might be that the students were able to name only three substances they had used.

In the years 1992-2003m the percentages of students who had used drugs in the last 12 months grew steadily (from 5% to 24%). In 2008, this indicator had fallen to 15%; however, it kept rising slightly in the subsequent measurements. Since 2016, we have been observing a downward trend with the rate of 13% recorded in the latest edition of the survey.

6.3. Types of drugs

The general category of drugs covers numerous substances of various effects ranging from stimulants to tranquilizers. Since 2008, the questionnaire has featured questions about the use of respective substances by young people. The respondents were asked to report whether they had used drugs in the last 30 days, last 12 months or ever in their lifetime by checking the appropriate box. Individuals who reported using drugs in the last 30 days were automatically assigned to the group of last 12 months and lifetime users. Consequently, the percentages of answers to these questions cannot be totalled. The table below shows a breakdown of the answers. Slight changes were introduced in the 2013 survey. They aimed at simplifying the tool by combining cocaine and crack into one group similarly to LSD and hallucinogenic mushrooms, which shortened the list of substances to be checked by the respondents.

Cannabis (marijuana and hashish) was the most prevalent drug. Lifetime prevalence rates for this substances stood at 36% in 2021, which marks a fall of 6 percentage points compared to the record year of 2016. Every fifth student had used marijuana or hashish in the last 12 months (19%, 20% in 2018) while every tenth had done so in the last 30 days (10%, 9% in 2018). Every fifth student reported ever using sedatives and hypnotics without doctor's prescription (20%, 22% in 2018), in the last 12 months it was nearly every tenth student (11%, 14% in 2018) and in the last 30 days almost every twentieth (5%, 6% in 2018). A decrease was observed in the prevalence rates for using sedatives and hypnotics without doctor's prescription. In terms of the highest prevalence cannabis is followed by amphetamine. In 2021, 6% of the respondents reported experimenting with this drug. The last 12 months and last 30 days prevalence rates stood at 3% and 2% respectively. Lifetime prevalence rates for ecstasy was 4% while 2% of the students reported using the drug in the last 12 months and 1% in the last 30 days.

Table 6.6. Substance use prevalence rates

Never						Yes																	
						Lifetime						Last 12 months						Last 30 days					
2008	2010	2013	2016	2018	2021	2008	2010	2013	2016	2018	2021	2008	2010	2013	2016	2018	2021	2008	2010	2013	2016	2018	2021
in %																							
Marijuana or hashish																							
69,1	63,0	59,3	57,2	61,1	63,0	30,5	35,7	40,2	42,0	37,5	36,2	16,4	18,0	23,0	21,0	20,2	19,4	7,3	7,7	9,0	9,9	9,3	9,8
Sedatives and hypnotics without doctor's prescription																							
77,9	78,4	79,6	80,2	76,6	78,4	21,8	19,9	19,7	18,6	22,0	20,4	11,2	9,6	11,0	9,2	13,7	11,0	4,7	3,8	5,1	4,4	6,3	5,4
Amphetamine																							
90,6	91,0	92,1	92,0	92.0	93,0	9,0	6,8	6,9	7,2	5,9	6,0	3,7	3,0	3,4	3,3	3,2	3,1	1,1	1,5	1,7	1,4	1,3	1,7
Ecstasy																							
94,3	94,8	96,7	95,3	94,3	95,2	5,5	3,5	2,6	3,9	4,2	3,8	3,0	1,4	1,4	1,9	1,8	1,8	1,1	0,8	1,0	0,9	1,1	0,9
Inhalants																							
96,8	95,3	96,5	96,5	94,8	95,8	2,9	2,8	2,8	2,8	3,8	3,1	1,0	0,7	0,7	1,2	1,8	0,9	0,6	0,5	0,5	0,8	1,1	0,9
LSD or other hallucinogenic substances (as of 2013 including hallucinogenic mushrooms)																							
97,5	94,9	95,1	94,9	94,2	95,5	2,3	3,3	4,4	4,3	4,4	3,5	1,3	1,4	1,8	2,2	2,2	1,5	0,5	0,7	1,1	1,1	1,2	0,5
Hallucinogenic mushrooms																							
96,1	94,7	-	-	-	-	3,6	3,4	-	-	-	-	2,0	1,4	-	-	-	-	1,1	0,6	-	-	-	-
Cocaine (as of 2013 including crack)																							
97,5	94,8	96	95,4	94,9	95,7	2,2	2,3	3,5	3,4	3,7	3,4	1,1	0,7	1,9	1,6	2,1	1,6	0,6	0,6	1,1	1,0	1,2	0,7
Crack																							
98,6	95,8	-	-	-	-	1,2	2,3	-	-	-	-	0,5	0,6	-	-	-	-	0,4	0,5	-	-	-	-

Source: KBPN survey. The breakdown does not include 'data not available'.

Table 6.6. cont. Substance use prevalence rates

Never						Yes																	
						Lifetime						Last 12 months						Last 30 days					
2008	2010	2013	2016	2018	2021	2008	2010	2013	2016	2018	2021	2008	2010	2013	2016	2018	2021	2008	2010	2013	2016	2018	2021
in %																							
Relevin																							
99,1	96,7	98,5	97,1	97,0	98,0	0,8	1,4	1,0	1,7	1,6	1,6	0,4	0,4	0,4	0,7	1,1	0,6	0,3	0,3	0,2	0,6	0,9	0,4
Heroin																							
98,5	96,3	97,9	96,9	96,8	97,8	1,3	1,9	1,6	1,9	1,8	1,2	0,6	0,8	1,0	0,7	1,2	0,5	0,1	0,5	0,7	0,7	1.0	0,4
Cough or cold medicines used for intoxicating purposes																							
96,5	93,6	95,3	94,3	95,0	94,3	3,2	4,7	4,2	4,9	3,8	4,7	1,9	2,2	2,1	1,9	1,7	2,0	0,9	1,1	1,0	1,2	1,1	1,0
New psychoactive substances																							
96,4	86,8	94,3	95,6	96,0	97,4	3,5	11,4	5,2	3,6	2,6	1,6	2,6	7,2	2,0	1,1	1,5	0,3	1,5	1,1	1,0	0,7	0,7	0,3
Dextromethorphan (DXM)																							
98,8	97,0	98,1	97,0	96,8	96,8	1,0	1,3	1,4	1,8	1,6	1,5	0,6	0,4	0,8	0,8	0,9	0,5	0,5	0,2	0,1	0,6	0,5	0,2
Anabolic steroids																							
96,4	95,2	97,1	95,7	96,3	96,3	3,4	2,9	2,2	2,9	2,2	1,3	1,9	0,9	1,2	1,5	1,3	0,6	0,7	0,5	0,7	1,3	0,9	0,3
Mephedrone																							
-	-	-	-	-	94,6	-	-	-	-	-	4,4	-	-	-	-	-	2,1	-	-	-	-	-	1,4

Source: KBPN survey. The breakdown does not include 'data not available'.

6.7 New psychoactive substances

In the case of new psychoactive substances, a fall in prevalence rates has been observed. The percentage of lifetime users stood at 1.6%. The rates for the last 12 months and last 30 days prevalence both stood at 0.3% of the respondents. These are the lowest figures recorded since the onset of the survey i.e. 2008.

In 2021, the battery of questions about the respective psychoactive substances for the first time included the question about mephedrone, which is a new psychoactive substance of stimulating effects that was delegalized in 2010. 4.4% of the respondents reported using the substance at least once in a lifetime, 2.1% had used it in the last year and 1.4% had used it in the last 30 days. 62% of the respondents had heard of new psychoactive substances in 2021 (64% in 2018). Another aspect mentioned in the survey was purchasing new psychoactive substances. According to the latest edition of the survey, 1.1% of the respondents (1.3% in 2018) purchased the substances at high street stores. 2.3% of the respondents (1.4% in 2018) used the Polish online stores while 2.2% (1.4% in 2018) opted for foreign shops. A similar percentage of the respondents (2.3%) used darknet markets (1.8% in 2018).

7. Summary and conclusions

NSPs have been available in Poland for many years and some of them such as mephedrone (synthetic cathinone) have already entered the „canon" of traditional drugs alongside well-known substances such as amphetamines and heroin. The phenomenon of new psychoactive substances has been present in the drug debate since as early as 2008 and for many years it has been a major topic of discussions. Since the introduction of new legislative solutions in 2018, the debate has ceased to be so intense. That year, brick-and-mortar shops were closed by the police and currently the NPS market is based on online sales, for example through Telegram applications and drug dealers. Many data and analyses indicate that the scale of this phenomenon is changing. According to school surveys, the percentage rates of people reporting using NPS are decreasing. Similarly, the number of samples analysed under the Early Warning System is falling. In addition, the quantity and weight of confiscated substances (especially cathinones) remain high, and there has been an increase in the detections of clandestine NPS laboratories. Since 2011, when the first laboratory manufacturing synthetic cathinones was detected in Poland, 45 laboratories had been dismantled by March 2021. Polish criminal

groups smuggle NPS precursors into the Netherlands. It is worth noting that old, long-banned substances are returning onto the market and new products are appearing. As a result, the NPS picture is unclear. It seems that the NPS phenomenon has been significantly limited and law enforcement agencies, along with the 2018 amendment, were given tools that enabled them to more effectively counteract NPS. These tools are currently being successfully used. The NPS phenomenon increasingly resembles the traditional drug market. However, the level of danger to users from the abovementioned substances has not changed significantly. New NPS keep emerging. Due to their mechanism of action, they can cause poisoning and deaths on a larger scale. In 2021, over 500 medical interventions were recorded, probably in relation to the use of NPS. Moreover, there are reports that some „old" NPS are arriving on the market on an unprecedented scale. The large-scale production of cathinones in Poland gives rise to a number of further questions and potential hazards:

- Is the market driven by demand or supply?

Is the market shaped through user preferences or do manufacturers shape it by offering a wide range of products that are easier to manufacture?

- Are cathinones becoming the main stimulant on the Polish market? If so, what threat can they pose to public health?

Are cathinones starting to replace traditional stimulants such as amphetamine on the Polish market? If so, what long-term consequences can such a change bring to public health?

- Is production intended for the domestic or external market?

Are cathinones produced in Poland intended for the domestic market, or is Poland becoming a significant, if not the main, European producer of cathinones, as was the case in the 1990s with amphetamines?

- To what extent are domestic/international organized criminal groups involved in the production and distribution of NPS?

Do cathinone manufacturers operate within organized domestic or European groups and to what extent can this contribute to the increase in not only drug-related but also violence-related crime that arises when competing criminal groups are present?

New trends in the supply of new psychoactive substances have emerged worldwide. NPS are increasingly being manufactured in Europe. China may be giving way to India as the main producer of NPS globally, as an increasing number of new psychoactive substances are coming from that country to Europe. Within the European Early Warning System, 880 NPS are being monitored. Currently, efforts are underway to support the system through the establishment of a network of forensic and toxicological laboratories collaborating with the new EU agency: EU Drugs Agency[1].

In conclusion, it should not be expected that new psychoactive substances will completely disappear from the market. It is more likely that they will find their permanent place on the illicit drug market. An example of such a trend could be mephedrone, which had been criminalized in Poland in 2009 to subsequently enter the group of traditional drugs. Therefore, key measures in combating the phenomenon of NPS should involve actions aimed at both reducing the supply and demand for such substances. Regarding the latter, effective preventive programmes should be highlighted such as those listed in the recommended programmes database[2] as well as the utilization of European experiences such as training prevention professionals under the European Prevention Curriculum (EUPC). Over the past 15 years, Poland has successfully created numerous materials addressing NPS for various target audiences ranging from prevention professionals in schools, for example the „Smak życia, czyli debata o dopalaczach" programme to a handbook for healthcare professionals titled „Standards of Conduct with People Using New Psychoactive Substances (NPS)." Furthermore, for many years, the National Bureau for Drug Prevention has run the website https://dopalaczeinfo.pl, which contains reliable and verified information about new psychoactive substances. It is also worth noting that from the very beginning, coordinated and consistent efforts have been made in Poland to collect and analyse information regarding the scale of the problem.

In 2008, one of the first (if not the first) nationwide survey among school youth in Europe was conducted in order to estimate the prevalence of NPS use. This study served as a starting point for further monitoring. The Polish system of preventive actions, which is part of the larger efforts to counteract drug addiction, is primarily based on the activities of local authorities and organizations, which have implemented numerous prevention initiatives over the past 15 years aimed at reducing the scale of the NPS phenomena.

1 The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) is planned to be transformed into the EU Drugs Agency (Europejska Agencja Narkotykowa).
2 The database is located here: https://programyrekomendowane.pl

Positive trends recently observed in the area of NPS use may be the result of the work of many individuals at the local level, both in local authorities and organizations. The main role of the National Centre for the Prevention of Addictions (KCPU) was to support these tasks and activities by creating and promoting effective preventive and intervention tools as well as monitoring solutions based on data analysis. Poland was one of the first countries in Europe not only to combat NPS sales but also to implement demand reduction measures (prevention, education, information and treatment). This was made possible through the establishment of a broad coalition of various institutions, which were supported for many years by the two main institutions addressing this issue: the National Bureau for Drug Prevention (KBPN) and the Chief Sanitary Inspectorate.

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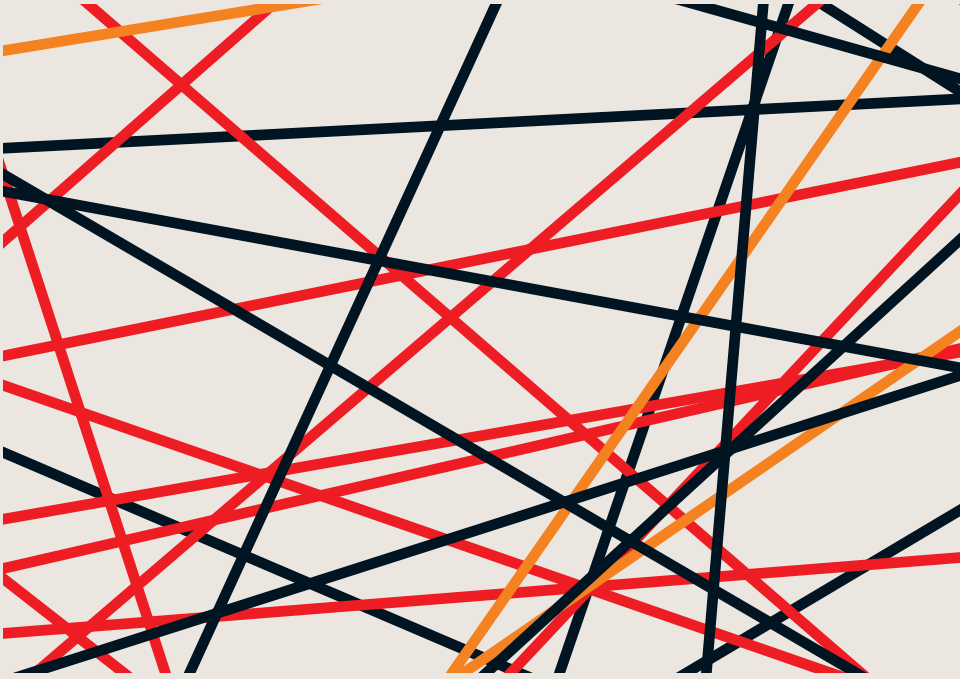
9. About the Authors

Piotr Jabłoński holds a PhD from Medical University in Poznan and an MA in pedagogy from the University of Warsaw. Mr Jabłoński is a healthcare manager and a certified addiction psychotherapist with many years of experience of working with addicted individuals. He worked as Director of the National Bureau for Drug Prevention from 1999 to 2021. Since 1 January 2022, he holds the position of Director of the National Centre for the Prevention of Addictions. Mr Jabłoński has also been appointed as the Secretary of the Council for the Prevention of Addictions. From 2007 to 2010, he served as the Chair of the Permanent Correspondents of the Pompidou Group of the Council of Europe. He is a member of the Board of the European Monitoring Centre for Drugs and Drug Addiction in Lisbon. He represents Poland in the EU Horizontal Drugs Group. Mr Jabłoński has acted as an expert in various European Union programmes in Croatia, Turkey, Serbia and Central Asian countries. He has received numerous honours and awards, including the Gold Cross of Merit, medals for merit in the Police and Prison Service, a medal for anti-drug efforts from the Republic of Kyrgyzstan and the Pro Merito Medal from the Council of Europe.

Artur Malczewski holds a Ph.D. in social sciences from the University of Gdansk and an MA in sociology from the University of Warsaw. Mr Malczewski is currently the Head of the Research, Monitoring and International Cooperation Department at the National Centre for the Prevention of Addictions, which serves as the Reitox Focal Point of EMCDDA (European Monitoring Centre for Drugs and Drug Addiction). For over 20 years, he has been involved in monitoring drugs and addiction. He is the author and co-author of over 200 publications in Polish and English on addiction-related topics. He has participated as an expert or coordinator in several international projects focused on monitoring and prevention. In 2021, he was awarded the European Society for Prevention Research (EUSPR) prize for „Leading European Practice in Prevention." In 2022, he received an honorary badge for merits in healthcare from the Minister of Health.

Michał Kidawa holds an MA in political sciences from the Institute of Social Prevention and Rehabilitation at the University of Warsaw. Since 2005, he has been working at the National Bureau for Drug Prevention (currently National Centre for the Prevention of Addictions). His areas of expertise include monitoring new trends in drugs and drug addiction, new psychoactive substances, drug market and law-related aspects. He is responsible for creating , coordinating and developing the Early Warning System on New Drugs. Mr Kidawa is also involved in developing the treatment demand indicator. Furthermore, he has been co-creating and expanding the data collection and processing systems for the National Centre for the Prevention of Addictions. Mr Kidawa has authored numerous publications on the subject of drugs and addiction.



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