

Organization of Pharmaceutical Business and Forensic Pharmacy: Multidisciplinary Gender Study of Risks in Cases of Violations of Circulation of Psychoactive Substances

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Abstract. The contemporary pharmaceutical industry plays an integral role in ensuring healthcare quality by developing, producing, and distributing medications to mitigate various ailments. However, this industry's intersection with forensic pharmacy, particularly in the context of psychoactive substances abuse, presents a myriad of challenges, risks, and considerations. This study explored these challenges from a multidisciplinary gendered lens, attempting to unearth the different ways genders experience risks associated with psychoactive substance abuse. Findings reveal that the pharmaceutical business structure, predominantly male-driven in leadership roles, has inadvertently shaped drug development and marketing strategies. This often neglects gender-specific responses and considerations for psychoactive substances, leading to gender disparities in drug-related harm and misuse. Women, for instance, metabolize certain substances differently, making them more susceptible to side effects and potential misuse. Additionally, forensic pharmacy, which investigates drug-related incidents and ensures

regulatory compliance, frequently overlooks gender-specific patterns of substance misuse. There is a need for improved gender-inclusive data analytics, ensuring that drug-related forensic investigations consider male and female biological and sociocultural differences. The study suggests that a gender-responsive approach in both pharmaceutical business operations and forensic pharmacy investigations can mitigate the risks and enhance preventive measures. This could lead to better drug safety profiles, more accurate forensic results, and a reduction in the prevalence of psychoactive substance misuse. Emphasizing the need for a multidisciplinary and inclusive approach, this research underscores the importance of acknowledging gender as a pivotal factor in understanding and addressing the challenges in the intersection of pharmaceutical business organization and forensic pharmacy related to psychoactive substances abuse.

Keywords: pharmaceutical business, forensic pharmacy, gender study, psychoactive substances, abuse.

Introduction. In recent years, the risks of guaranteeing pharmaceutical safety during violations of the circulation of psychoactive substances have been increasing. According to the data of forensic pharmaceutical studies, there is a trend that women of different age groups are increasingly detained by law enforcement agencies. The gender characteristic in relation to women is followed in the commission of offenses related to the circulation of psychoactive drugs and prohibited psychoactive substances: drug dealing, murder, theft, fraud, extortion, robbery, robberies with the use of psychoactive drugs, deception of buyers, infliction of bodily harm of various degrees of severity, traffic accidents under the influence of psychoactive substances [1-14]. The consequences of a violation of pharmaceutical safety are embodied in the aggravation of the main somatic diseases against the background of accompanying comorbid conditions [15-25], which is not a modern phenomenon for Ukraine and the countries of the European Union.

During the last three years, the appearance of deformations in the economic sphere is influenced by the increase in the level of unemployment in the state, including among women. This entails a decrease in work motivation, the spread of alcoholism, and other deviant behavior of women [26]. In Ukraine, 57% of crimes are committed by women over the age of 30, about 60% of female criminals are unemployed or partially employed, 52% abused alcohol, 22% were related to illegal circulation of psychoactive substances. Total of 76.4% of convicted were women. Young people under the age of 25 predominate among those convicted of theft, robbery, and robbery: 47.9% were convicted of robbery, 35.4% were convicted of robbery, and 32.2% were convicted of theft [27-29].

Today, Ukrainian drug policy continues to be dominated by the criminal law vector, contrary to the world trend of humanization [30]. This led to the creation of the appearance of the effectiveness

of actions and the justification of the need for repression, the illegal, groundless extension of their powers to the sphere of regulation of legal circulation. As a result: an increase in administrative restrictions on the use of medicinal narcotics, which leads to unjustified suffering of patients.

Over the past 25 years, mortality in the United States from overdoses of prohibited psychoactive substances has been increasing and has even become a factor in a certain reduction in overall life expectancy [31]. During the pandemic, the drug addiction problem in the US, which has only gotten worse, has taken a back seat. Excessive use of psychoactive substances and alcohol are associated with stress, fear, and uncertainty during the pandemic.

The experience of the USA expands the use of drugs of various clinical and pharmacological groups for the pharmacotherapy of pregnant women with addictive disorders [32]. It is noted that the availability of buprenorphine and methadone drugs for pregnant women with addictive addiction has increased. Such methods of pharmacotherapy are controversial, but increasingly accepted as a scientifically proven way to reduce addiction and save lives. Pregnant women with addictions are more likely to die from an overdose of illicit psychoactive substances than the average woman of childbearing age.

According to the Centers for Disease Control and Prevention, the number of cases of opioid use among pregnant women has more than quadrupled in recent years. Consequences – low birth weight of babies, premature birth, miscarriages [33, 34].

Forensic pharmaceutical studies of disorders of the circulation of psychoactive substances are described in the publications of Linskii I.V., Shapovalova V.O., Sosin I.K., Maruta N.O., Shapovalov V.V., Minko O.I., Chuiev Yu.F., Osyntseva A.O. etc. [4-6, 9-13, 15-17, 20, 21, 25, 28, 35-40].

However, the study of the problem from the point of view of the organization of the pharmaceutical case and forensic pharmacy for the multidisciplinary study of risks in the violation of the circulation of psychoactive substances, taking into account gender characteristics, has not been conducted so far in the world and in Ukraine.

The purpose of the study was to conduct a multidisciplinary study of risks in the event of a violation of the circulation of psychoactive substances against the background of women's drug business, addiction in the format of the specialty of pharmaceutical case organization and forensic pharmacy.

Materials and methods. The multidisciplinary study included organizational and legal, forensic and pharmaceutical, forensic and narcological, forensic and medical, clinical and pharmacological, social and economic, criminal and legal study of risks in violation of the circulation of psychoactive substances, taking into account gender characteristics. The research was conducted at the Department of Pharmacy of the State Institution "Luhansk State Medical University", the Department of Organization and Economics of Pharmacy, Drug Technology and Biopharmaceutics of the private higher educational institution "Lviv Medical University" from 2021 to 2023.

The research was conducted taking into account the scientific experience and publications of the Department of Medical and Pharmaceutical Law, General and Clinical Pharmacy for the period 1985-2022; recommendations of the State Institution "Institute of Psychiatry, Forensic Psychiatric Examination and Drug Monitoring of the Ministry of Health of Ukraine" "Monitoring the Drug Situation in Ukraine"; scientific publications on the topic of the article [8-40].

Retrospective, comparative, documentary, graphical, legal, systemic, tabular, and forensic pharmaceutical research methods were used.

The study is a fragment of research works of Luhansk State Medical University «Conceptual interdisciplinary approaches to pharmaceutical provision and availability of drugs, taking into account organizational and legal, technological, analytical, pharmacognostic, forensic and pharmaceutical, clinical and pharmacological, pharmacoeconomic, marketing, social and economic competencies" (state registration number 0123U101632, terms 2023-2027); Lviv Medical Institute LLC on the topic of "Improving the system of circulation of drugs during pharmacotherapy on the basis of evidentiary and forensic pharmacy, organization, technology, biopharmacy and pharmaceutical law" (state registration number 0120U105348, implementation period 2021-2026).

Results and discussion. Forensic and pharmaceutical studies of criminal cases, court verdicts and publications in public access on the Internet, related to the circulation and abuse of prohibited psychoactive substances, psychoactive drugs, testify to the increase in the level of narcotization of women, teenagers, and young people. Gender data indicate that women [41, 42]: increase the level of consumption of prohibited psychoactive substances, although they remain in the minority of users worldwide; men progress to addictive disorders faster; make up approximately 45-49% of users of amphetamines and psychoactive drugs (stimulants, opioids, sedatives, tranquilizers); make up one in five people being treated for amphetamine addiction.

A sociological survey on gender roles and stereotypes proved that more than two-thirds of Ukrainian citizens agree with the thesis that a woman's main vocation is to give birth and raise a child [43].

According to the Institute for Health Metrics and Evaluation of the University of Washington, cited by Gallagher L. [44], the global fertility rate almost halved in 2017, to 2.4. According to data published in the Lancet [45], the birth rate will fall below 1.7 by 2100 (Fig. 1).

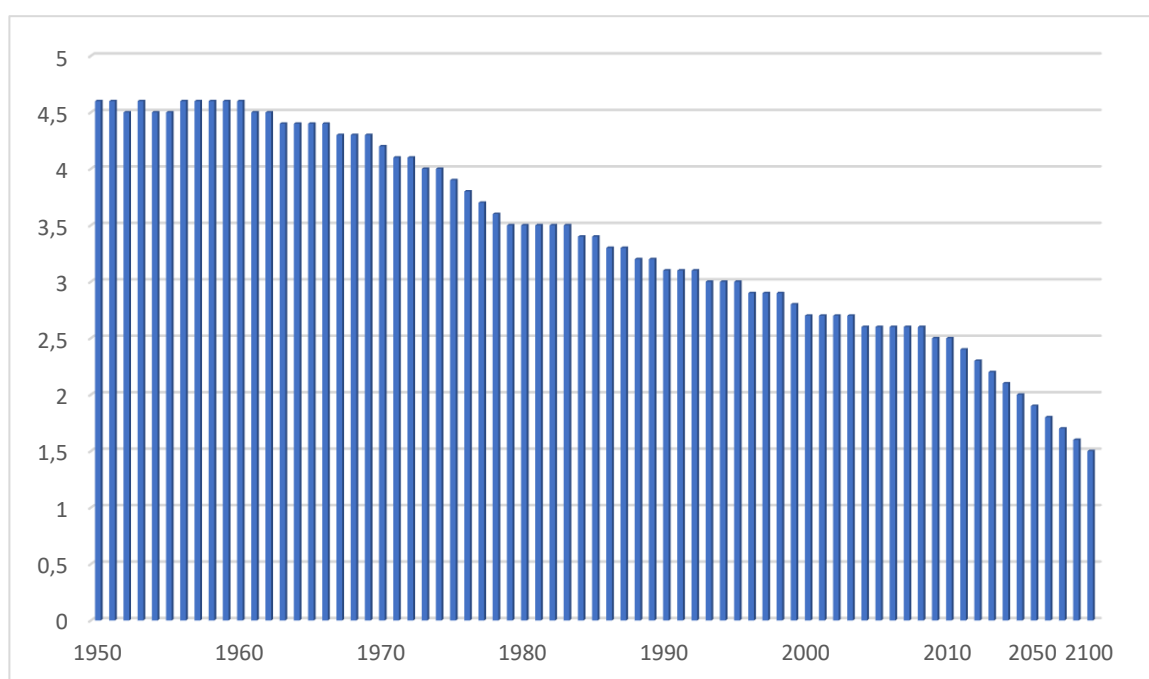


Fig. 1. World birth rate [44, 45].

Researchers expect that the number of people on the planet will reach the highest level of 9.7 billion by about 2064, and then decrease to 8.8 billion by the end of the century. According to the state statistics, the birth rate in Ukraine is falling for the eighth year in a row [46-48]. The reasons for women's refusal to have children include the following (Fig. 2).

As of 2019, among all families with children, 74.8% are limited to only one offspring; 22.5% have two children; only 2.7% decided on three or more. The birth rate in Ukraine is the lowest in Europe. On average, one woman in Ukraine has 1.2 children. In EU countries, this indicator is 1.56. Life expectancy in Ukraine is significantly lower than in EU countries: Ukrainian women live on average six years less, and men – 11.

Separately, we note that the population losses in Ukraine due to the war and related migration processes are assessed by scientists as catastrophic [49, 50]. It is necessary to stabilize the demographic situation at the expense of the natural factor, to increase life expectancy by taking care of health, which depends on the behavior and lifestyle of everyone. Self-restriction of alcohol consumption, proper nutrition, and physical activity [51]. After the end of the war, unfortunately, mental, and psychological health problems are predicted to increase in both military personnel and many other people who will need support. And so that this does not become the reason for a premature

farewell to life, it is worth setting up the active work of specialized specialists and support services now. Only a comprehensive solution to demographic problems will give Ukrainians a chance to remain a numerical nation of winners.

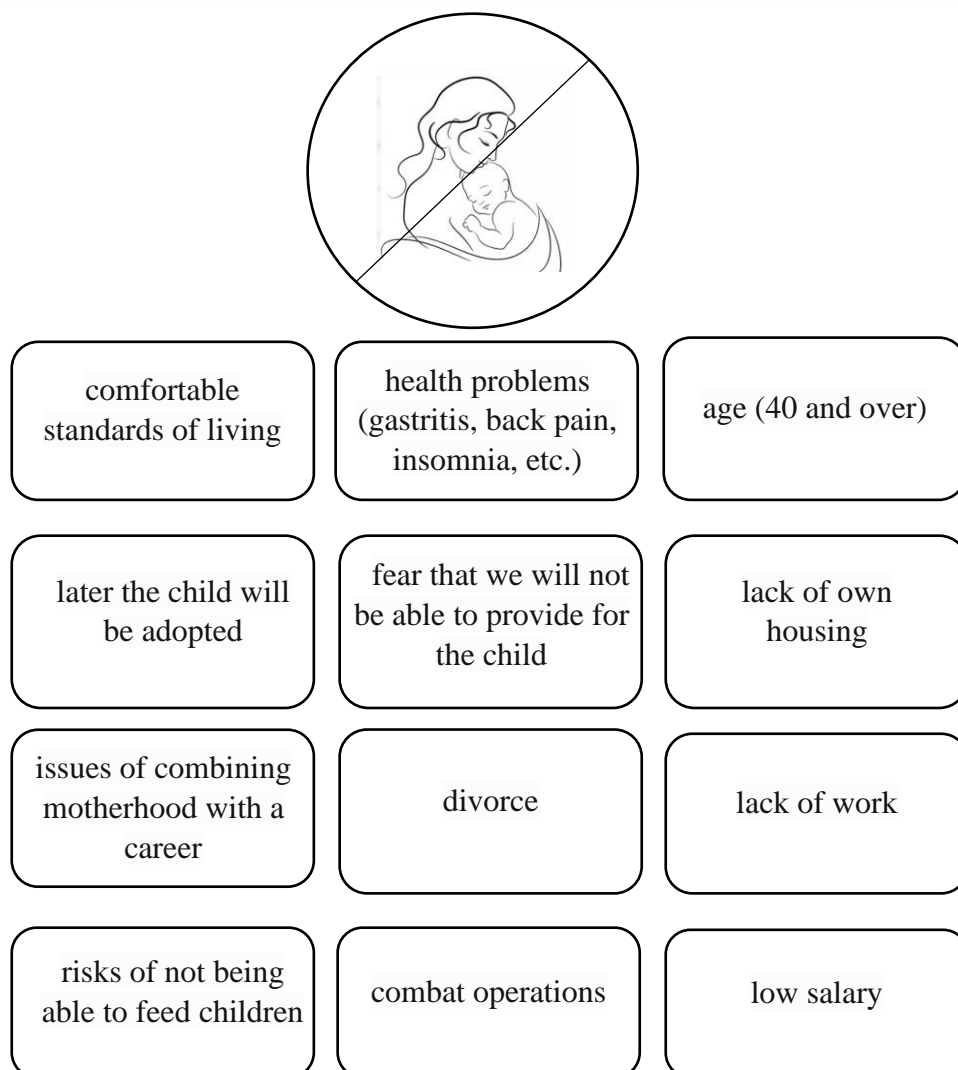


Fig. 2. Reasons for women's refusal to have children [46-48].

There are forensic pharmaceutical risks for the security of European countries due to the violation of the circulation of psychoactive substances. Citizens of the European Union annually spend from 21 to 31 billion euros on the use of prohibited psychoactive substances. Cannabis (marijuana) is most abused in Europe. Ukraine is included in the list of countries where cannabis is illegally cultivated indoors. The problem of involvement of women and teenagers in the illegal circulation of prohibited psychoactive substances deserves special attention in the world [52, 53]. Psychoactive substances include alcohol, tobacco, prohibited synthetic and semi-synthetic narcotics and psychotropic substances. Ways to solve the problem are proposed [54]:

- intensify the work of law enforcement officers in the fight against the so-called "bookmarks" of prohibited psychoactive substances;
- intensify the work of the cyber police to remove sites and Telegram channels that advertise the illegal circulation of prohibited psychoactive substances;
- involve communal services of town halls, state, and local self-government bodies in the elimination of drug advertising in the form of graffiti and inscriptions;
- identify dealers who distribute prohibited psychoactive substances;
- organize a systematic examination of schoolchildren by narcologists, psychiatrists, and family doctors;

- involve psychologists to work with children prone to addiction;
- hold regular meetings with parents, invite specialists to such meetings who will be able to explain all the consequences of using drugs, alcohol, tobacco, and gambling;
- launch a broad educational campaign in the country with the participation of the first persons of the state, politicians, stars of show business, public activists, scientists, athletes.

Systematic analysis of sociological research carried out in the state shows that 30% of children aged 9 to 15 used drugs at least once; 70% of people suffering from drug addiction are young people under the age of 25; the percentage of female drug addiction is the highest in Europe, which undoubtedly negatively affects the demographic situation [55-57].

One of the ways of involving young people in illegal drug circulation is their inclination to use prohibited psychoactive substances. Prevention of such illegal actions, their timely detection and termination is an essential factor in the effectiveness of countering illegal drug trade. An important role in preventing violations of the circulation of psychoactive substances is assigned to the bodies and divisions of the National Police [58], state authorities and local self-government. Statistics show that over the past five years, the number of detected criminal offenses related to addiction to psychoactive substances has decreased seven times in Ukraine (from 233 in 2014 to 33 in 2018). In 2016, only 10 people were identified, and 31 in 2017; in 2018 – 23 [59]. The General Prosecutor's Office of Ukraine is strengthening its activities in this direction, fulfilling the principle of comprehensiveness, completeness, and objectivity of investigators during the investigation of criminal cases for sale of prohibited narcotics (Art. 307 of the Criminal Code of Ukraine) and illegal storage without the purpose of sale (Art. 309 of the Criminal Code of Ukraine).

The National Institute on Drugs and Addiction (NIDA, USA) is the leading federal agency that supports scientific research on drug and psychoactive substance abuse and its negative consequences [60]. According to studies in the US, addicted women can have problems with hormones, menstrual cycles, fertility, pregnancy, breastfeeding, and menopause. It is noted that women:

- often use psychoactive substances in smaller doses;
- react differently to psychoactive substances, there is a possibility of relapse after treatment;
- more sensitive to the effects of some medicines than men;
- may experience a stronger physical impact on the heart and circulatory system;
- have brain changes that differ from those in men;
- more likely to go to the emergency department for medical and pharmaceutical care of the consequences of an overdose;
- from domestic violence have an increased risk of using psychoactive substances;
- divorce, loss of custody of a child, death of a partner or a child can trigger mental health disorders (anxiety, depression, seizures, panic);
- use marijuana during pregnancy, which causes concern among medical professionals.

Since the beginning of 2020, operatives of the Department for Combating Narcotic Crime have seized almost 1,000 kg of prohibited narcotic and psychotropic psychoactive substances from illegal circulation; liquidated 54 drug laboratories; 68 organized drug gangs and organized criminal organizations. Drug business included the illegal manufacture, sale, distribution, involvement, and inclination to use prohibited psychoactive substances [61]. The basis of operational development is the tracking of the entire vertical of the entry of prohibited psychoactive substances to the end user; detection of the criminal pyramid from the bottom up, i.e., from the ordinary hostage to the main organizer-supplier; detection of "small" drug dealers. Determined that now it has become more difficult to detect criminal connections between members of the group, as drug dealers have minimized personal contact with clients. On the Internet, orders, sales, and "delivery" notifications take place through anonymous channels in messengers. On average, in just one day, the income from illegal activities related to the sale of drugs through the Internet is almost 7 million UAH. In a month, this figure reaches about 210 million UAH.

It is necessary to find ways to comprehensively solve the problem of disorders of the circulation of psychoactive substances. The draft law on amendments to Art. 183 of the Criminal

Procedure Code of Ukraine – "Detention in custody" is under consideration in the relevant committees of the Verkhovna Rada of Ukraine. It is proposed to give the investigating judge, the court, the right not to determine the amount of bail in criminal proceedings opened for the sale of narcotic drugs and psychotropic substances. Also, necessary to introduce a legislative mechanism for banning the circulation of the substance "requires an update and list of poisonous and potent substances with a definition of the mechanism of control over their circulation. Due to this existing gap, investigators are still sometimes unable to qualify the actions of criminals in accordance with Art. 321 of the Criminal Code of Ukraine, which provides for responsibility for the illegal production, manufacture, acquisition, transportation, forwarding, storage for the purpose of sale or sale of poisonous or potent substances or poisonous or potent medicinal substances means It requires the implementation of an electronic prescription for the dispensing of psychoactive narcotic and psychotropic drugs from pharmacies.

Police activity in the USA in the fight against violations of the circulation of prohibited psychoactive substances has not achieved its stated goal – to reduce street drug trafficking within the country [62]. The World Health Organization classifies police brutality as a form of violence. Violence [63]: "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, which results or is likely to result in injury, death, psychological harm, maldevelopment, or deprivation."

Forensic and pharmaceutical practice (examples No. 1-5) characterizes that women's offenses make up 10-40 percent of committed latent crimes [64].

Forensic and pharmaceutical example No. 1. Investigators in the Ivano-Frankivsk region informed a woman-dealer that she was suspected of having committed a criminal offense under part 3 of Art. 307 of the Criminal Code of Ukraine [65]. The police detained a woman who was "bookmarking" packets of psychoactive substances prohibited for circulation in Ukraine. Later, the woman sold the "goods" on the territory of Ivano-Frankivsk for patients with psychoneurological health disorders. During the search of the woman's apartment, the police found and seized narcotic drugs and psychotropic substances, a mobile phone, "draft" documentation, bank cards, electronic scales, packaging materials and other evidence of illegal circulation of psychoactive substances. Physical evidence was sent to forensic, chemical, and pharmaceutical research.

Forensic and pharmaceutical example No. 2. Investigators of the Darnytskyi Department of State Administration of Internal Affairs in the city of Kyiv initiated criminal proceedings under Part 2 of Art. 307 of the Criminal Code of Ukraine [66, 67]. She sold psilocybin mushrooms and cannabis. A woman faces up to ten years in prison for such a "business".

The detained 28-year-old woman from Kyiv was involved in the drug business through an online store. During the search, more than 1 kg of cannabis was seized; 0.8 kg of prilocin mushrooms; more than 1 kg of cupcakes and cookies with cannabinoids. The value of the seized psychoactive substances at black market prices is over 2 million hryvnias. The woman was detained in accordance with Art. 208 of the Criminal Procedure Code of Ukraine and placed in a temporary detention facility. Forensic-pharmaceutical, forensic-medical, and forensic-narcological examinations have been appointed.

Forensic and pharmaceutical example No. 3. Investigators have started a pre-trial investigation in criminal proceedings under part 3 of Art. 305 and Part 3 of Art. 307 of the Criminal Code of Ukraine [68, 69]. Operatives of the Lviv border detachment, together with the National Police and the State Customs Service of Ukraine, stopped the activities of a criminal group that established a smuggling channel for the supply of prohibited narcotics and psychotropic substances in particularly large quantities from EU countries. It was established that a 28-year-old resident of Kyiv purchased narcotic drugs and psychotropic substances abroad. In the future, the perpetrator delivered "parcels" by regular bus to Ukraine. Drugs were disguised as food products. Her accomplice, a 25-year-old man from Lviv, received the goods. He organized the distribution of drugs through the Telegram channel. Sales were carried out in bulk batches, in a hidden form in postal shipments across the territory of Ukraine. The settlement was carried out in a cashless way using cryptocurrencies. During the searches, 12,970 tablets of different colors, outwardly similar to the psychotropic substance

"MDMA", were seized; 0.580 kg of the drug ketamine; 3000 brands of "LSD", a psychotropic substance. Forensic expert research has been ordered on the case. The value of the seized at black market prices is about 16 million hryvnias.

Forensic and pharmaceutical example No. 4. Investigators in the Lviv region established a suspicion of committing a criminal offense provided for in Part 1 of Art. 307 of the Criminal Code of Ukraine [69-71]. Established that a 21-year-old woman was detained in the city of Lviv during the sale of prohibited narcotics. About 150 psychotropic and narcotic tablets, 10 brands of "LSD", psilocybin mushrooms, as well as other narcotic drugs and packaging boxes were seized from the suspect. The detained woman organized the sale of prohibited narcotic drugs and psychotropic drugs throughout Ukraine. She used the Internet, ordered, and received prohibited psychoactive substances. After that, they were packaged and sold to drug-addicted citizens.

Forensic and pharmaceutical example No. 5. Investigators in the Khmelnytsky region brought a woman to criminal liability under Art. 309 of the Criminal Code of Ukraine under Part 3 of Art. 307 of the Criminal Code of Ukraine [69, 72]. Established that the woman was "bookmarking" the bags. In the presence of witnesses, more than 50 coils with a crystalline substance were found on her during a cursory inspection. During the forensic pharmaceutical research, it was established that this is a synthetic banned psychoactive substance "PVP".

Analysis of forensic and pharmaceutical practice shows that:

- women who were involved in criminal cases related to the sale of narcotics and psychotropic substances;
- all women who committed crimes were arrested and the court chose a preventive measure for them – detention;
- none of the crime reports provided information about the composition of each woman's family, her employment, and the state of health of each woman.

As Gladkova E.O. points out, population drugging and related drug crime are among the biggest problems of modern law enforcement [73]. Need to solve the following problems:

- social and economic – play the role of factors that fuel drug crime;
- criminal law – related to the spread of drug addiction, the formation of the domestic drug market;
- law enforcement – related to countering drug crimes.

So, female drug addiction is a special gender phenomenon in society, medicine, pharmacy, and criminal law. Women are five times more likely to be prosecuted for using prohibited psychoactive substances. If earlier there was one woman for every ten men among drug addicts, today the ratio is five men and two women. Female drug traffickers gain self-confidence by succeeding in a brutal business, but do not challenge male dominance [74].

Existing gender features affect the division of labor, property rights, and areas of responsibility among drug-addicted women and men. Social problems prevent drug-addicted women from leading a safer lifestyle and seeking help from social services [75].

In turn, as noted by Reznichenko S. and Reznichenko G. [76], there are no official statistics on the number of convicted women who are prescribed compulsory treatment for addiction. At the current stage, there is no possibility of high-quality medical and pharmaceutical care and pharmaceutical support for convicted women.

Disorders of the circulation of psychoactive substances, addictive disorders, and drug-related crime are risks to national security [77]. No one knows the number of uncounted (latent) citizens in need of drug addiction treatment per one hundred thousand registered drug addiction patients [78]. The number of drug addicts increases by 8% annually. Among drug addicts, 70% are young people under 25 years old. The growth rate of female drug addiction is the highest in Europe. The situation with drug addiction in the USA is more dire than in Ukraine. School psychiatrists in the USA massively prescribe children Ritalin, which is as powerful as cocaine, and other psychotropic substances that have terrible side effects [79]. Another problem is the advertising and sale of prohibited psychoactive substances (Fig. 4).

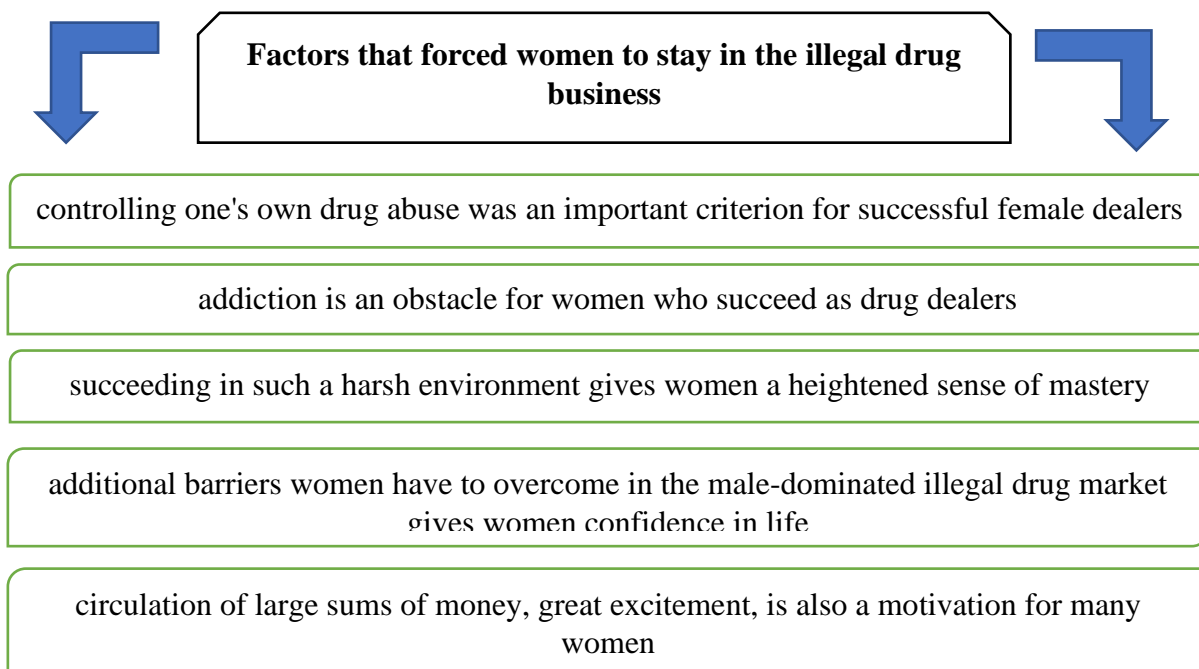


Fig. 3. Factors that forced women to stay in the drug economy [74].

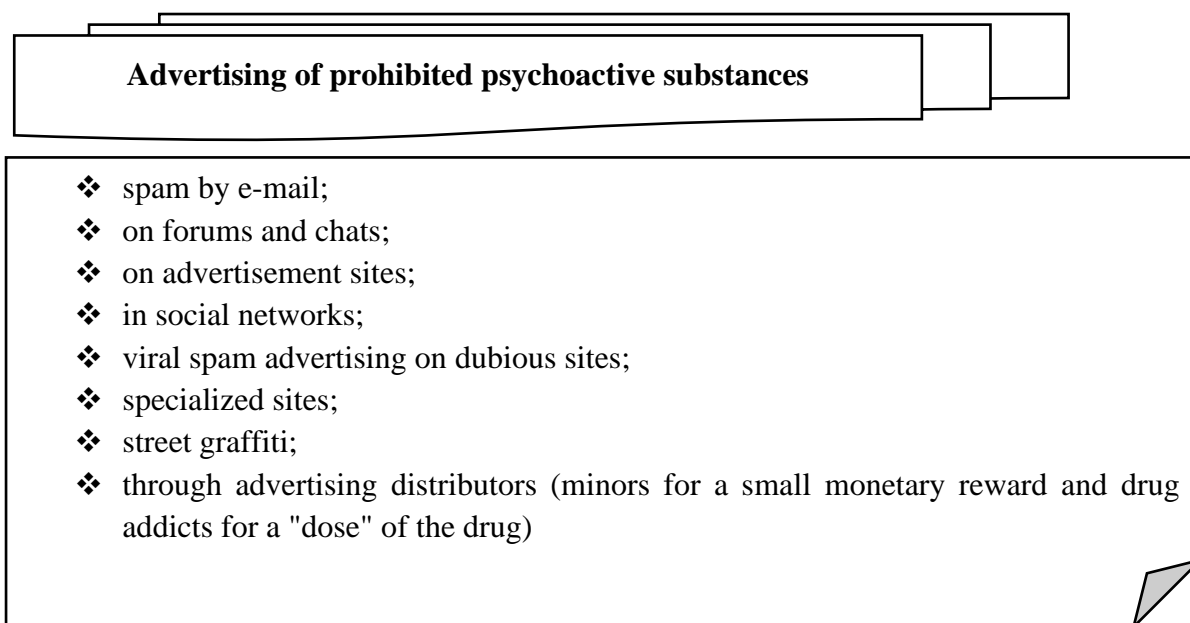


Fig. 4. Advertising of prohibited psychoactive substances.

UN specialists note the problem of gender addiction of the female population in the world (Table 1).

Table 1. Overview of the problems of women's participation in the illegal circulation of prohibited psychoactive substances in the countries of the world [80].

No.	Country	Problems of studying narcotization of the female population
1.	Norway	Four main strategies used by female drug traffickers were identified: 1 – desexualization (elimination of signs of one's own femininity); 2 – formation of violent and defiant behavior, propensity for violence, cruelty in social relations, demonstration of activity.

2.	Australia	Studied the working methods of women who sell amphetamines, heroin, or cannabis. All the women interviewed demonstrated varying degrees of success, determined by the amount of money or the number of drugs that passed through their hands. Threats of violence or actual violence were infrequently reported by the participants in the study, and they were forced to rely on the reputation of their families or peers to stop threats of violence or violence from rival groups.
3.	Mexico	Women may become involved in drug trafficking as a result of their male partner's involvement in this activity; they may commit crimes together with their male partner or face prison terms after taking responsibility for their crime. Women involved at the lowest level of the hierarchy in the drug supply chain work as petty traders, "narco-mules" or couriers, or play the role of "companions" providing sexual services to male drug dealers. The function of "drug cartels" may include the purchase, storage, and transportation of drugs from one place to another (internationally or locally) on behalf of others.
4.	Latin America	Women play the role of decoys, drug cartels to divert attention from large contraband shipments of drugs that are transported by professional smugglers across international borders. "Narco-mules" can travel by air, sea, or land (by car, bus or on foot) and hide drugs in vehicles, luggage, clothing, on their bodies ("container couriers") or in their bodies ("drug swallows"). Yakuza is an example of an organization that engages in illegal circulation and openly recruits "drug gangs". It is known that she posts advertisements on the Internet about importing drugs to Japan for international couriers. In one case, the courier was a 71-year-old Japanese woman who inadvertently transported amphetamines from Egypt to Japan.
5.	West Africa	Strategies have been developed to recruit women living with HIV or suffering from other diseases to be used as "narco-mules". Women traffic cocaine between Latin America and Europe, and methamphetamine to East and Southeast Asia and South Africa. Other African cartels are known to recruit women, particularly women in vulnerable situations, including white women, women with children, the elderly, and the disabled, for use as regular couriers because they are less likely to be caught by the authorities.
6.	South Asia	Illegal drug traffickers employ large numbers of women and children in Bangladesh to transport heroin and bottled Phensidyl (codeine-based cough syrup) across the border from India. Poverty and financial necessity push women to participate in illegal drug circulation.
7.	North America	Many women involved in the illegal drug trade come from poorly educated families where they have experienced physical and sexual abuse and violence. Some women are in a crisis because of their vulnerability to substance use and mental illness. Many of them have the responsibility of caring for their dependents (children, grandchildren, the elderly or disabled family members). Some women are single mothers. Research shows that there is an inextricable link between drug trafficking, drug use, prostitution, and human trafficking.

Abuse of psychoactive substances (cocaine, amphetamine etc.) destroys the brain of women more than the brain of men [81]. Brain changes were also associated with behavioral changes: greater impulsivity, increased expectation of reward.

Female addiction has specific features [82]:

- ✓ a woman (girl) rarely becomes a drug addict of her own free will;

- ✓ the decision to take the 1st dose of a prohibited psychoactive substance matures in her mind under the influence of a man who is nearby;
- ✓ a significant role in the formation and development of addiction is also played by the personal qualities of the woman herself (early sexual life, indiscretion in the choice of partners, tendency to deviant behavior);
- ✓ female addiction is formed from barbiturates, tranquilizers, antidepressants, simultaneous use of alcohol, tobacco, stimulants;
- ✓ female addiction is much more difficult to treat than male addiction;
- ✓ remissions occur much less often in drug-addicted women than in men;
- ✓ the causes of addiction relapse in women are the same as in men (anxiety, irritability, depression), which are provoked by unsettled personal life and professional undemanding.

In order to counter the transnational drug business, it is necessary to continue reforming the Way of reforming the law enforcement system and bringing it into line with global legal standards in the field of health care, the law enforcement system and bringing it into line with global legal standards (Fig. 5).

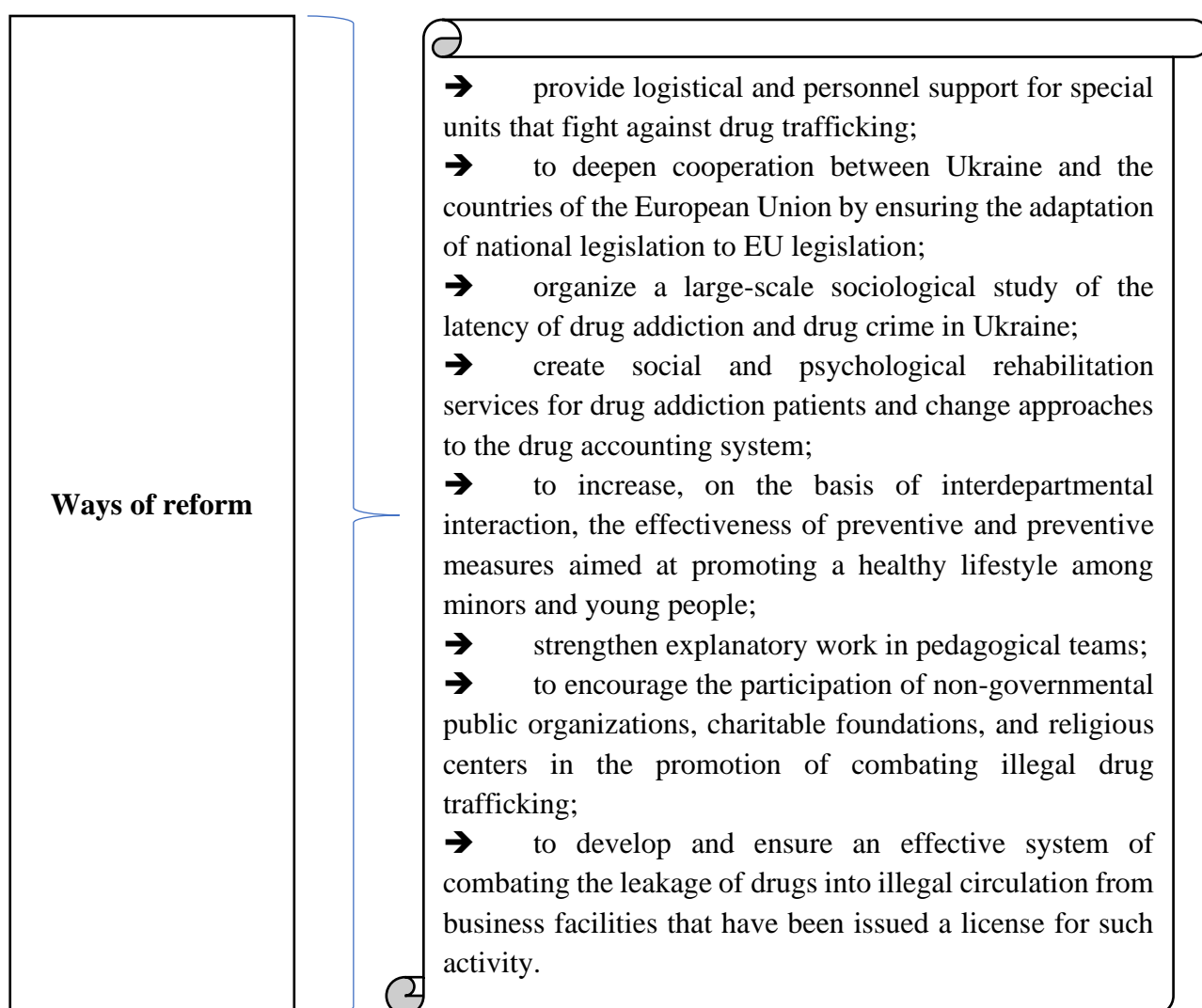


Fig. 5. Ways of reforming the health care and law enforcement system to bring it into line with global legal standards [83].

The high level of circulation of prohibited psychoactive substances is maintained due to its high latency. The main tasks of the National Police are highlighted [84]:

- ❖ provide extensive educational activities among different contingents and age groups of the population regarding the legal and psychological consequences of the abuse of psychoactive substances;
- ❖ carry out systematic monitoring of information products in mass media and Internet sites in order to identify the facts of dissemination of information about methods of production and use of prohibited psychoactive substances;
- ❖ identify youth drug use centers;
- ❖ conduct preventive measures with high-risk groups of non-medical drug use;
- ❖ timely submit to the relevant state bodies, public associations, and to officials submissions on the elimination of the causes and conditions that contribute to the commission of such crimes
- ❖ to establish permanent interaction with local self-government bodies, health care institutions, and education for the exchange of information in the field of illegal circulation of prohibited psychoactive substances.

Specialists in the USA suggest taking a course on countering addiction to psychoactive substances [85]. The surge in opioid addiction and overdose deaths is a crisis. The consequences of addiction are numerous. Cycles for training doctors, nurses, and psychologists have been created in an interactive format. Addiction is accompanied by relapses and health problems for women of various ages and professions [86]. Many women who use illegal psychoactive substances do not seek medical and pharmaceutical help because of fear. Women are afraid that they will not be able to support and raise their children. Women fear revenge from their roommates or spouses. Women fear punishment from the authorities. Substance abuse increases the risk of HIV/AIDS. HIV/AIDS is the fourth leading cause of death among women of childbearing age. Risks of damage during injection use: shared needles, syringes, cotton swabs, unprotected sex. Studies show that women benefit more from drug addiction clinics that provide comprehensive services to meet basic needs: food, clothing, and shelter; transport; legal assistance; literacy training; family therapy; couple counseling; aid; babysitting; social services; social support; psychological assessment and care for the psychological state; self-esteem training; family planning services.

Most often, female addiction develops according to a predictable scenario [87]. In 80% of cases, the first use occurs to improve mood, find new sensations, and overcome depression. It is influenced by genetic predisposition, an unfavorable environment that forces one to engage in prostitution and use drugs, and low self-esteem. Abuse affects a woman's reproductive function. Risks of addiction for women during pregnancy: premature birth, formation of a fetus with psychological and physical abnormalities, birth of a fetus in withdrawal syndrome, cases of stillbirth. The effect of addiction on the female body: premature aging, HIV/AIDS, hepatitis, brain dysfunction, kidney and liver disorders, cardiovascular system disorders, venous insufficiency, thrombophlebitis. The Law of Ukraine "Basics of Ukrainian legislation on health care" [88] states that every person has a natural, inalienable, and inviolable right to health care. Society and the state are responsible to present and future generations for the level of health and preservation of the gene pool of the people of Ukraine, ensure the priority of health care in the activities of the state, improvement of working conditions, education, living and recreation of the population, solving environmental problems, improving medical care and introduction of a healthy lifestyle. Further research continues in the specialty format of pharmaceutical business organization, drug technology and forensic pharmacy.

Conclusions. Multidisciplinary organizational and legal, forensic and pharmaceutical, clinical and pharmacological, social and economic, criminal and legal study of the interrelationship of female addiction, drug dealing, related to violations of the circulation of prohibited psychoactive substances was conducted. Studied that the gender characteristic of women is observed in the commission of crimes related to the circulation of psychoactive drugs and prohibited psychoactive substances (drug dealing, criminal crimes, causing bodily injuries of various degrees of severity, traffic accidents under the influence of psychoactive substances). The experience of the USA regarding the use of drugs of various clinical and pharmacological groups for pharmacotherapy of addiction in pregnant women was studied. A sociological survey on gender roles in violations of the circulation of prohibited psychoactive substances was analyzed. It was noted about the birth rate in the world, the reasons for

women's refusal to have children. The experience of European countries in solving the problem of circulation of prohibited psychoactive substances was presented. Forensic and pharmaceutical practice, factors that forced women to stay in the drug economy were analyzed. An overview of the problems of women's participation in the illegal circulation of prohibited psychoactive substances in the countries of the world (Norway, Australia, Mexico, Latin America, West Africa, South Asia, North America) was conducted. Ways of reforming the sphere of health care and the law enforcement system in order to bring them into line with global legal standards have been worked out.

Conflict of interest. The author has approved the article for publication and declare that the research was conducted in the absence of any conflict or potential conflict of interest.

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