RESEARCH ARTICLE

Digital Drugs: Between the Power of Attraction and the Danger

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Abstract
Through this theoretical study, we sought to explore the topic of digital drugs from several angles, particularly given the lack of sufficient attention it has received from specialized researchers and legal professionals. We address the emergence and historical roots of digital drugs and compare digital and traditional drugs. We also highlight the most prominent theoretical approaches that explain drug addiction. Furthermore, we clarified the effects of digital drug consumption on the individual, especially in light of the lack of attention to this type of drug and the underestimation of its risks and impacts both on the user and on society and its institutions as a whole. In this context, we, as specialists, find ourselves compelled to undertake an awareness-raising and educational effort to introduce digital drugs and the means of dealing with them. If this phenomenon spreads further, it will be challenging to confront, primarily since it relies solely on internet-based marketing and consumption, which is far from any oversight and does not draw the attention of others..

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Introduction

Despite the long-standing issue of drugs, along with the resulting cases of addiction and the variety of crimes committed under the influence of both natural and synthetic substances, and despite the alarming spread of drug trafficking due to the promise of quick profit as well as the multitude of international agreements aimed at combating it, drugs continue to adopt new patterns and effects that strongly attract both trafficking gangs and consumers. Moreover, drug trafficking has increasingly become intertwined with sex trafficking, the human organ trade, and human smuggling.

Digital drugs represent a new development in the world of narcotics, emerging as part of a shift in marketing strategies aimed at avoiding restrictions, risks, and security monitoring. Some websites and online forums have begun to advertise digital drugs, providing information on how to obtain and use them. The availability of the internet, even in underdeveloped and remote communities, facilitates the spread of these digital toxins. One can imagine the potential proliferation of these drugs among children and adolescents over time, possibly leading them to advanced stages of addiction that society might not detect until it becomes a serious social illness.

This prompted us to attempt to answer the central question through this study: to what extent can digital drugs compete with traditional drugs? What are the factors that make them attractive, and what unique dangers do digital drugs present in comparison to natural drugs?

1 – Emergence of Digital Drugs:

Discussing the emergence or appearance of digital drugs has led us to trace their roots and sources. In this context, Scottish musician *Richard Lawrence*, on the basis of his experience, discovered a significant impact of music on the human psyche. He prepared certain musical pieces, incorporating specific sounds to induce psychological and physical relaxation and to stimulate physical and mental activity.[1]

Multiple studies have also explored the effects of certain musical tracks on listeners, the most prominent of which is the study conducted by physicist *Heinrich Dove* in 1839. In his scientific experiment, he directed two slightly different frequencies to each ear and found that the subconscious mind generates an internal frequency heard only within. For example, if a sound at 250 Hz is directed to the left ear and another at 230 Hz is directed to the right ear, the

subconscious mind produces an internal stimulating frequency of 20 Hz. This frequency can induce a state of psychological relaxation or even sleep.

In 1950, *Grey Walter* discovered the neurological effects of sound or light waves and their impact on the brain. In 1960, *Bernard* published an article on the influence of auditory contrast processes on the brain in cases involving tooth extraction procedures.[2]

Digital drugs were also used for the first time in 1970 to treat patients with depression and patients with psychological disorders who refused to take medications. This was accomplished through electromagnetic frequencies aimed at adjusting their moods.

Music associated with digital drugs has also been used in psychiatric treatment centers because of a deficiency in the secretion of mood-enhancing substances in some mental health patients. These patients require stimulation of nerve cells to trigger the release of such chemicals. This process was conducted under medical supervision and specific conditions—most importantly, listening duration should not exceed a few seconds and should be limited to no more than twice a day.

The binaural beat technique has also been adopted in the treatment of depression, as it helps increase the level of the happiness hormone dopamine in the body during listening sessions. This method involves wearing headphones, closing one's eyes, turning off the lights, and isolating oneself. The use of this technique was officially approved in 1979 for the treatment of patients with depression.[3]

Furthermore, in 2011, digital drugs were used in French society through audio files lasting between 15 and 30 minutes. These files were based on binaural beats—two different frequencies directed to each ear—stimulating the human brain to process, analyse, and merge the auditory frequencies into a third sound, representing the difference between the original frequencies. This exposed the brain to fatigue and induced a state of sedation.[4]

2 – Difference between Digital Drugs and Traditional Drugs:

Although digital drugs perform the same function as traditional drugs do for users, there are several key differences between them, which can be summarized as follows:

- In terms of usage, digital drugs consist of specific audio or musical tones listened to under certain conditions to reach a state of euphoria and loss of consciousness. In contrast, traditional drugs require the consumption of a manufactured or natural substance for the user to achieve the desired pleasure and unconsciousness.

- Obtaining digital drugs is a straightforward process that involves no risk and is not legally prohibited, whereas acquiring traditional drugs involves significant danger both in obtaining and using them, especially given that they are criminalized under various legal systems and subject to strict security monitoring regarding their possession, use, or trafficking.

- The effects of traditional drugs extend to all body parts and are physically noticeable. In contrast, digital drugs primarily affect the brain. Excessive exposure leads to the destruction of brain and nerve cells, which negatively impacts concentration and thinking. It can also cause disturbances in the auditory system and brain cells and feelings of euphoria, drowsiness, and temporary psychological comfort. Scientific studies are still ongoing to determine the full effects of digital drug consumption.

- Traditional drugs cause actual physical sedation, and their physiological effects are often visible to the user. Moreover, digital drugs are considered psychological stimulants that rely on tones and sound waves, and their impact is not visible on the user's body.

- The low financial cost of obtaining digital drugs contrasts with the relatively high cost of traditional drugs, especially hard drugs. Digital drugs can be accessed via only a computer or a smartphone, which makes it easy for children to obtain them, potentially leading them to consume traditional drugs as well.[5]

Notably, while digital drugs may seem less dangerous in terms of their physical effects on the user's body, they are highly dangerous in terms of how easily they can be accessed without any risk, even by children. Additionally, digital drugs do not require direct contact with drug dealers or involvement with criminal networks, unlike traditional drugs do.

Moreover, digital drugs are challenging to monitor, and users under their influence cannot be easily detected. This is perhaps what makes digital drugs a strong competitor to—or even a potential substitute for traditional drugs, given the advantages users receive, especially in the absence of legal provisions in any country thus far that they explicitly criminalize this type of drug, despite its inherent risks.

3 – Types of Digital Drugs:

Many types of digital drugs differ in their effects on the user or their simulation of specific types of traditional drugs. The most notable types include the following:

■ **High Wave:** These loud audio tones stimulate the body's and mind's cells, significantly increasing physical activity.

■ **Entertainment Waves:** These provide the user with joy and amusement as if they were genuinely experiencing it.

■ **Sexual Waves:** These waves lead the user to reach the peak of sexual pleasure, simulating an actual sexual experience.

■ **Crystal Legend:** These calm tones give the user a sense of relaxation and hallucination.[6]

■ **Hands of God Waves:** Sold at high prices, reaching up to $200, these waves induce vision and inspiration.

■ **Content Waves:** Promoters claim that these waves help achieve satisfaction and peace of mind.

■ **Theta Waves:** Promoted as a tool for reprogramming the brain to feel relaxed and forget the past.

■ **Anaesthesia Waves:** Believed to help eliminate the sensation of pain.

■ **Morphine Waves:** These create a feeling of intense drowsiness and a lack of concentration.

■ **Alcohol Waves:** Simulate the sensation of consuming alcohol.

■ **Marijuana Waves:** Said to mimic the effects of marijuana.

■ **Cocaine Waves:** Audio tones that simulate the experience of using cocaine, including stimulation of the body and brain.[7]

It is evident from the various patterns of digital drugs presented here that the producers of these audio tones are attempting to simulate every type of traditional drug, aiming to achieve the euphoria and sensations sought by users. This significantly increases their profits, as they do not bear the traditional risks associated with transportation, evasion of surveillance, or conflicts between drug-trafficking gangs. Instead, the entire process is carried out through a computer or smartphone and a website that displays the product's audio tones and markets them directly over the internet, with no effort required from either the user or the seller.

3 – Patterns of Digital Drug Use:

The use of digital drugs is not random; instead, it follows a set of conditions and rituals intended to create the desired sensation or euphoria. This is evident in the fact that the producers of these drugs are careful to provide comprehensive information on how to use each type. Clear usage instructions are provided on various websites that promote these substances, and users can obtain a user manual in the form of a printable digital file that can reach up to forty pages.

This manual includes a definition of the product, which is often associated with the name of a traditional drug, as well as step-by-step guidance on how to use it to achieve the intended feeling. It also details the symptoms and effects that may result from its use.[8]

Websites offer their digital drug products according to pricing and the sensation the user aims to achieve. There are cheap, short audio files lasting approximately fifteen minutes, whereas others can last up to one hour. Some audio files are carefully engineered to be used in stages such as doses so that the user can gradually reach the desired feeling. These websites adopt the same strategies used in promoting traditional drugs and luring victims: they initially offer free audio files, which later become paid content after a short period. This pushes the user into a cycle of habituation, eventually compelling them to purchase and try other types.[9]

As previously mentioned, digital drugs have an attractive quality due to the absence of risk in obtaining them. They are discreet enough that even family members might not notice a user's engagement with them. In contrast, the initial stage of trying traditional drugs is often difficult because of fears of legal consequences, medical testing, and other complications. This can make the experience more complex and potentially lead individuals to be exploited by criminal gangs or become involved in other illegal activities.

The primary difference from digital drugs is that these risks are absent, which generates significant curiosity and a false sense of safety in individuals when they decide to try them.

4 – Theories Explaining Addiction:

Numerous theories have been proposed to explain drug addiction, spanning psychological, behavioural, social, biological, spiritual, and psychosocial approaches. Below is an overview of the most prominent of these theories:

First – Biological Theories:

Biological theories explain drug use on the basis of biochemical or physiological mechanisms. Human studies have played a central role in testing genetic theories related to addiction in humans. Proponents of these theories argue that if genes influence addiction, then individuals who inherit part of the genetic material from addicted ancestors will be more likely to experience the same conditions and struggles as their forebears.

Researcher *Amarque*, through his extensive studies on Swedish society, identified a familial genetic element linked to alcohol addiction. He calculated the likelihood of alcohol dependence among siblings known to have parents with addiction issues. The rates were as follows:

- Among brothers: 21%
- Among sisters: 0–9%
- Among fathers: 26%
- Among mothers: 2%

Genetic theory centers on the role of heredity in the emergence and development of addiction disorders. Sensitivity, susceptibility, and specific individuals' tendencies toward addiction have led scientists to investigate the underlying factors behind the intense urge to consume narcotic substances. Genetic science has revealed the reality of alcohol addiction within certain families. It has been assumed that the likelihood of individuals becoming alcohol dependent is greater

among certain ethnic and racial groups because of genetic factors. Conversely, individuals from other ethnic-racial groups appear to have protective genetic factors or immunity that prevent the misuse of alcohol or intoxicants.

However, these theories have faced significant criticism for neglecting other important factors that strongly influence an individual's inclination toward drug or alcohol use—such as social, cultural, and psychological factors—which exert significant pressure in driving individuals toward substance use and addiction.

Molecular biological techniques have isolated and identified genes that may trigger addictive behavior. Enzymes such as monoamine oxidase and lymph glands may serve as biochemical indicators of tendencies and inclinations toward addiction. Alcohol and other narcotic drugs cause changes in the nature and structure of the brain and may lead to chronic brain diseases. Even the mere sight or smell of a substance can stimulate the brain's electrical circuits, which are altered as a result of substance abuse.

Here, the effect of digital drugs, which may influence the brain's electrical circuits through their unbalanced sound waves, emerges. A study conducted by a group of medical students at Yale University revealed that the protein "Delta FosB" activates the brains and genes of mice in ways that increase their craving for cocaine. When this process occurs in humans, it helps explain cocaine addiction, which is often difficult to identify or diagnose.

There are also various habitual behaviours, such as compulsive shopping, sexual addiction, and the tendency to ignore directives—behaviours that negatively affect decision-making ability. These include the poor choice and consumption of drugs without understanding the consequences, driven by the pursuit of pleasure or euphoria while ignoring the associated risks.

Alcohol consumption, drug use, and addictive behaviours such as gambling, shopping, sexual activity, or ignoring prohibitions all either increase pleasure or relieve pain. Heroin addicts often claim that they use the drug merely to feel "normal" as a way to justify or escape reality because of their inability to cope with the challenges and difficulties of life, thus resorting to addiction.

Within the framework of biological theories, it remains challenging to determine whether the effects of digital drugs can be transmitted genetically,[10] particularly given the significant limitations in the use of devices capable of detecting individuals who consume digital drugs. Digital drugs may not leave biological or physiological traces on the person.

This reality necessitates conducting numerous studies—especially longitudinal studies—to measure the biological impact of digital drugs and the extent to which this impact may extend to users' families. Such research is essential for identifying appropriate mechanisms for dealing with these cases.

Second – Trait Theory:

Researchers in sociology and psychology have conducted numerous studies to understand the factors that lead individuals toward addiction and to identify the personality traits of people with an addiction on the basis of personality patterns and characteristics. For example, *Blaine* identified some traits of addictive personalities, which are often mentioned in studies and research related to alcohol abuse. These traits include low-level depression, sociability, feelings of inferiority, a sense of weakness and insignificance mixed with tendencies toward idealism, fear, and dependence on others.

In a Canadian study that tracked 1,034 children from kindergarten and preschool over ten years to assess and measure their personality traits, it was reported that some of them progressed from smoking to alcohol use and then to other drugs. A strong desire for novelty and a low threshold for avoiding harm were statistically significant indicators in the study.

Additionally, *Gérard* and *Courtois*, through their 1955 study of teenagers addicted to heroin, concluded that these youths had experienced severe psychological maladjustment. They described the school community as one plagued by acute frustration and feelings of absurdity, futility, failure, and relapse.

On the basis of trait theory, an individual who uses or becomes addicted to drugs exhibits certain personality traits that distinguish them from nonusers owing to the effects of the substances. When discussing digital drugs, we are also prompted to investigate their impact and reflections on the user, as they directly affect the mind.

These effects may manifest in unique personality traits that rely on drug use as a means of escaping a problematic social reality, compensating for failure in fulfilling roles, or attempting to gain social status and achieve self-actualization.

Third – Psychoanalytic Theory:

The psychology of addiction, according to psychoanalytic theory, is based on two main foundations. The first foundation lies in the psychological conflicts that arise from the need for security, the need for self-affirmation, and the need for sexual and narcissistic gratification. When individuals fail to resolve these internal conflicts, they resort to substance use.

The second foundation concerns the chemical effects of the drug itself. Psychoanalytic theory explains the phenomenon of addiction in light of the disturbances experienced by the individual during the early years of childhood, typically before the age of three or four. It also interprets addiction through the lens of disrupted emotional relationships during early childhood between the person with an addiction and their parents, which are often characterized by emotional ambivalence—feelings of both love and hatred toward the parents simultaneously. This dual emotional relationship contributes to psychological effects that promote the development of addiction, wherein the drug becomes a symbolic representation of the original love that was also a source of danger.[11]

Proponents of this theory believe that the person with an addiction turns to drugs in an attempt to achieve balance about a reality they perceive as being in conflict with. They see the drug as a means to help maintain that balance. Supporters of the psychoanalytic approach also suggest a link between alcohol addiction and an individual's focus on oral sexual needs, with people with addiction using substances to satisfy these oral or sexual desires as well as other unmet needs. According to this theory, oral frustrations and depression often originate from dysfunctional family structures, as perceived by some theorists.

The two additional core positions in psychoanalytic theory presented by *McCord* are linked to the idea that addiction arises as a response to psychological conflicts. However, the evidence and documentation supporting psychoanalytic theory remain inconclusive owing to the difficulty in designing practical experimental tests in this area.[12]

Nevertheless, no matter how deeply we delve into the views of psychoanalytic theorists—who focus on the internal conflict involved in attempting to achieve a balance between social reality and the self and whose influence cannot be overlooked—we must also acknowledge that this conflict would have a limited impact if it were not accompanied by other factors such as social and environmental conditions in general.

These latter factors can play a filtering role in helping individuals confront difficult situations and achieve psychological and social adaptation without resorting to the consumption of either traditional or digital drugs.

Fourth – Spiritual Theories or the Theory of Transcendence:

Spiritual philosophy is considered an essential aspect influencing human well-being and happiness. Spiritual or religious issues can serve as a central element in psychotherapy. Researcher *Rogers* (1980) emphasized the importance of the religious and spiritual dimension, whereas *Maslow* (1964) suggested that human beings are capable of transcending and rising above the limits of their personalities to achieve a deep sense of immortality and sacredness. Within this framework, parapsychology points to what lies beyond the self and is sometimes called the "fourth force" in Western psychology. This field seeks to achieve states of spiritual awareness and connection.

Scientist *Gerardi* (1991), in his book *Addiction and Grace*, argued that all humans possess an innate instinct toward God—whether religious or not. He explained that modern life creates a sense of loneliness and alienation in everyone and that addiction offers temporary relief. It can alleviate the loneliness and pain that this strange and puzzling world has. Psychostimulant substances and addictive behaviours help people transcend reality in front of them.

Oliveira (1995) added that individuals feel a sense of deficiency and emptiness in their lives, prompting them to seek compensation through addiction, as psychostimulants temporarily fill this gap or void. *Jung* described alcohol addiction as equivalent to spiritual and moral thirst and a search for inner perfection, a notion he put forward decades ago. He also considered spirituality and religion essential components of addiction recovery programs. Medicine and psychology are two healing forces for the mind, spirit, and body.

Spiritual emptiness has long been a fertile subject of discussion, dating back to the philosophers of ancient Greece, and it has remained a field of interest in social research up to contemporary society. Many Western studies—not just Arab studies—have explored the relationship between religious commitment and an individual's tendency to consume drugs. These studies generally agree on the importance of addressing the spiritual dimension of the individual, both as a preventive and therapeutic measure against substance use, including digital drugs, which aim to fill the spiritual void or what is referred to as weak faith in Muslim societies.

The danger, in this context, lies in the compensatory behaviour through which the individual attempts to find an alternative to their weakened faith by resorting to digital drugs and withdrawing from social reality. According to this theory, the user sees themselves as occupying a higher, more elevated state above reality, living alone and being disconnected from the complexities and conditions of contemporary life.[13]

Fifth – The General Theory of Reckless Behavior:

Proponents of this theory argue that an individual's engagement in deviant acts is linked to the presence of opportunity on the one hand and the existence of certain personality traits or low self-control on the other. *Gottfredson* and *Hirschi* defined reckless behaviour as any act based on force or deception to fulfil personal desires. In this sense, reckless behaviour indicates low self-control, which creates an opportunity for the individual to commit a criminal act. This act results from the combined influence of low self-control and the availability of opportunity to engage in reckless behaviour—this combination is the core of the general theory of reckless behaviour. According to *Gottfredson* and *Hirschi*, the difference between criminals and noncriminals lies in their varying levels of self-control.[14]

This theory holds that low self-control is a natural force that emerges from poor social upbringing, where parents fail to monitor the child's behaviour, do not notice signs of deviance, or neglect to discipline the child when necessary. Self-control developed during the early stages of socialization is essential for maintaining stable self-regulation in individuals. According to *Gottfredson*, reckless behaviour is governed by the desire to obtain pleasure and avoid boredom.

According to this theory, individuals evaluate the pleasure or satisfaction they might gain from reckless behaviour—such as drug use, including digital drugs—which leads them to choose this behaviour as a form of benefit. Regardless of whether the behaviour is socially unacceptable, achieving pleasure or enjoyment is considered far more valuable than the behaviour itself. As a result, the individual pays little attention to the social disapproval of the act, especially in the presence of low self-control.

Sixth – Systems Theory:

Systems theory views systems as integrated wholes, where different parts interact with one another and influence the system as a whole. The theory emphasizes how the various components within a system interact and how these interactions affect the system's behaviour.

It also focuses on the impact of the environment surrounding the system and how external factors can influence its performance. Systems strive to achieve a state of balance or stability by adapting to both internal and external changes. Their ability to adjust to shifts in the environment or surrounding conditions enables them to survive and continue functioning.

Bertalanffy asserted that all living systems are open systems. An open system maintains continuous inputs and outputs related to energy and its environment, becoming more diverse, complex, and organized. In contrast, a closed system is isolated from its environment and tends toward disorder and increasing chaos.

Systems theory views people as social beings rather than solely as psychological or biological entities.[15]

The discussion here on the role of the social environment in an individual's interaction—as a necessary process—leads us to consider the case of a drug addict who benefits from a treatment program aimed at eliminating the effects of addiction and achieving social adaptation. However, these individuals often return to their original environment, which is the cause of their deviation and continues to play the same role in pushing them back toward drug addiction.

This highlights the critical importance of the family environment and residential neighbourhood in reintegrating people with addiction into society. These elements not only are responsible for the emergence of addiction but also play a fundamental role in treating and combating it.

5 – Effects of Digital Drugs:

As previously mentioned, the danger of digital drugs lies in the difficulty of detecting and controlling their use. They may lead a person with an addiction into unknown and unpredictable territories, as everything takes place within a virtual world. With the advancement of artificial intelligence, these drugs could evolve into deadly conditions that are uncontrollable and pose a significant threat to specific segments of the population—namely, children and youth.

Many websites and forums have already begun advertising digital drugs, offering tempting promotions that often start with free samples to lure potential users.

Those who have experimented with digital drugs can be divided into two groups. One group claims that digital drugs have a significant positive effect if the conditions for their use are adequately followed. On the other hand, another group asserts that they have no positive effect. They argue that digital drugs lead to negative consequences for those who become accustomed to them. Users report experiencing constant pain in the head and ears, and the effects on the body are similar to those of traditional drugs. Over time, users may involuntarily scream and develop muscle spasms, and there is also potential for physical disabilities.[16]

Dr. Mohamed Ahmed Oweida, a professor of psychiatry at Al-Azhar University's Faculty of Medicine, confirmed that digital drugs place young people in a state similar to the effect of *holotropic* therapy. However, this therapeutic method must be performed under the supervision of a doctor to determine the type of music and the duration of listening, as its effects can be destructive. It has the same impact as hallucinogenic drugs and can lead to addiction. The effects of digital drugs vary from one individual to another, as some people have undiagnosed seizure foci, and they are the ones most likely to suffer from spasms. This means that individuals using digital drugs are at risk of developing severe physiological diseases due to seizures triggered by listening to audio clips designed as drugs. This represents a hidden danger that the user may not believe, as they perceive it as merely listening to music and as a form of positive emotional release.[17]

In this context, *Arji Al-Omda*, Neurology Consultant for the United Nations Medical Committee, stated that these doses of loud music cause harmful effects on brain electrical activity. The user not only feels euphoria and joy but also experiences what is medically referred to as a "moment of mental dissociation," which is extremely dangerous. It gives the user an illusory sense of pleasure and enjoyment. The repeated and violent fluctuations in brainwave activity caused by intense noise can lead to moments of dissociation and seizure episodes.[18]

Considering the various effects caused by digital drugs, we find that they range from direct consequences for the individual user to those affecting their family relationships, weakened professional performance, and involvement in addict networks that may combine digital and traditional drugs to attract more users.

The harmful effects of digital drugs on the user can be summarized as follows:

- Gradual physical and psychological balance loss is accompanied by a desire to live completely isolated from society.

- Damage to the user's auditory system is caused by exposure to various frequencies, with the possibility of experiencing loss of balance and limb tremors.

- Withdrawal: Drug-induced music requires the individual to isolate themselves from others to achieve the desired euphoria. With repeated use—leading to psychological addiction—the individual becomes reclusive and unable to form social relationships, even with their own family.

- The user may suffer from seizures and severe headaches, similar to the effects of traditional drugs.

- Decreased productivity and motivation to work due to lethargy, boredom, and a desire to withdraw from society. Academic performance may also decline as digital drugs affect cognitive processes and memory.[19]

- An overdose of digital drugs can lead to the destruction of brain and nerve cells, resulting in adverse effects on concentration, thinking, auditory function, and brain cells.

- In the future, digital drugs may lead children, adolescents, and youth to become addicted to real drugs.[20]

Thus, digital drugs are no less dangerous than traditional drugs are, as they cause brain dysfunction that may lead to seizures and epilepsy in the user. Mental dissociation is also not trivial, as it hinders the individual from performing daily tasks and fulfilling life roles, and it puts both their life and the lives of others at risk. Moreover, young users of digital drugs may be more likely to consume traditional drugs in the future, regardless of curiosity or a desire to diversify the types of substances they use.

Conclusion

On the basis of these findings, we found that digital drugs are no less dangerous than traditional drugs are, which leaves visible physiological symptoms on the user's body. However, digital drugs possess specific unique characteristics that increase their danger, especially in light of society's and institutions' negligence and their failure to recognize the reality and impact of digital drugs—both at the individual and societal levels.

In addition to their appeal, owing to the ease of access by minors without risk and without resorting to neighbourhoods known for drug trafficking—as is the case with traditional drugs—digital drugs affect the individual silently, often without the awareness of even their family members. Symptoms may only appear after the person has already entered the stage of addiction, manifested through deteriorating social relationships, depression, isolation, mania, confusion, etc.

This calls for a degree of digital awareness among family members so that they can identify whether someone in the household is using digital drugs. The danger will only grow with the development of artificial intelligence programs that allow users to simulate real sensations of pleasure or euphoria easily via straightforward tools.

Moreover, digital drug users cannot be identified through conventional testing, and the law does not criminalize them at all, which makes these substances even more dangerous than natural drugs. This highlights the urgent need for preventive measures rather than solely relying on treatment approaches.

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