

ZAMONAVIY KRIMINOLOGIYADA NARKOJINOYATLARNI OLDINI OLISHGA QARATILGAN ILMIY TADQIQOTLARNING YANGI USUL VA METODLARI

NEW METHODS AND TECHNIQUES FOR SCIENTIFIC RESEARCH ON THE PREVENTION OF DRUG CRIMES IN MODERN CRIMINOLOGY



*A'loxonov Muhammadmirzoxon
Adhamxon o'g'li*

*O'zbekiston Respublikasi
Kriminologiya tadqiqot instituti
ilmiy xodim*

*Alokhonov Mukhammadmirzokhon
Adkhamkhon ugli*

*Researcher at the Research Institute
of Criminology of the Republic of
Uzbekistan.*

Aynidinov Sardor Ikrom o'g'li

*O'zbekiston Respublikasi IIV
Jamoat xavfzligi departamenti
mas'ul xodimi.*

Aynidinov Sardor Ikrom ugli

*Responsible officer of the Public
Safety Department of the
Ministry of Internal Affairs of the
Republic of Uzbekistan.*



Annotatsiya. Ushbu maqolada zamonaviy kriminologiyada narkojinoyatlarga qarshi ilmiy tadqiqotlar o'tkazishda qo'llanilayotgan yangi usul va metodlar tahlil qilinib, unda narkojinoyatlarning mazmunan va shaklan murakkablashib borayotgani, xususan ularning transmilliy, yashirin va raqamli ko'rinishlari kuchayib borayotgani sharoitida an'anaviy yondashuvlar yetarli bo'lmay qolayotgani asoslangan. Shu munosabat bilan interdisiplinar, dalillarga asoslangan, raqamli-tahliliy va prognostik yondashuvlarning ilmiy ahamiyati ochib berilgan hamda narkojinoyatlarga oldini olishda doir tadqiqotlar samaradorligini oshirishga bo'yicha ilmiy xulosalar va takliflar ilgari surilgan.

Kalit so'zlar: zamonaviy kriminologiya, narkojinoyatlar, millat genafondi, ilmiy tadqiqotlar, yangi metodlar, interdisiplinar yondashuv, dalillarga asoslangan tahlil, risk assessment, kriminologik prognozlash, raqamli kriminologiya, hududiy monitoring.

Abstract. This article analyzes new methods and techniques used in scientific research on drug crimes within modern criminology. It establishes that traditional approaches are becoming insufficient in the context of the growing complexity of drug crimes in both substance and form, particularly with the intensification of their transnational, latent, and digital manifestations. In this regard, the article reveals the scientific significance of interdisciplinary, evidence-based, digital-analytical, and prognostic approaches. It also puts forward scientific conclusions and proposals to increase the effectiveness of research on the prevention of drug crimes.

Keywords: modern criminology, drug crimes, national gene pool, scientific research, new methods, interdisciplinary approach, evidence-based analysis, risk assessment, criminological forecasting, digital criminology, territorial monitoring.



Nowadays, drug crimes are manifested as one of the most complex, hidden, and transnational manifestations of modern crime. Their danger is explained not only by drug trafficking, but also by their direct impact on public health, social stability, economic security, youth education, the family environment, and national security. The sharp changes observed in the forms, methods, and organizational mechanisms of drug crimes, especially in recent years, indicate that studying this phenomenon based on traditional approaches is insufficient[1]. The expansion of digital technologies, encrypted communications, social networks, internet platforms, crypto assets, cross-border logistics, and hidden networks is making the detection, analysis, and prevention of drug crimes even more difficult[2].

In such conditions, scientific research aimed at preventing drug crimes must not only describe the circumstances of the crime but also identify its internal mechanisms, social roots, organizational networks, risk factors, and future development trends. This is because drug crime is not a simple criminal phenomenon, but rather a multifaceted and complex, latent, dynamic, and highly adaptable socio-legal process. Therefore, its in-depth study cannot be limited to classical legal or statistical analysis alone. Modern criminology, stemming from this very need, is developing new methods and approaches in scientific research aimed at preventing drug crimes.

From a criminological perspective, drug crimes are distinguished by several important features. First, they often have a high degree of latency, meaning they may not be fully reflected in official statistics. Second, drug crimes are frequently intertwined with other types of offenses, including corruption, illicit arms trafficking, human trafficking, money laundering, and violent crimes. Third, these crimes manifest in various organizational forms, ranging from the individual level to organized criminal groups, regional networks, and transnational criminal chains. Fourth, drug crimes create a field of risk involving youth, the

unemployed, socially vulnerable groups, and audiences highly susceptible to the influence of the internet. Consequently, studying them requires not a narrow criminal analysis, but a multifaceted scientific approach.

The ongoing renewal of approaches to the study of drug crimes in modern criminology is directly linked to the transformation of the crime itself. Whereas drug crimes were previously committed mainly through traditional trade channels, clandestine distribution networks, and physical contact, at the present stage, they are becoming more complex, decentralized, and rapidly adaptable through the use of digital tools [3]. In particular, online communication tools, anonymous messengers, cryptocurrency-based transactions, "darknet markets" and technologies that allow for the concealment of one's identity are elevating the fight against drug crimes to a new level, not only practically but also scientifically. This, in turn, creates the need for new methodological solutions.

This need is leading to the formation of new scientific methods and techniques in modern criminology. Specifically, approaches such as interdisciplinary analysis, evidence-based criminology, digital criminology, potential threat analysis, territorial monitoring, criminological forecasting, socio-psychological assessment, and analytical modeling are enabling a deeper and more precise study of drug-related crimes. Such methods serve to identify not only the recorded instances of drug crimes but also their hidden segments, the logic of their distribution, inter-subject connections, geographical distribution, risk levels, and potential future development trends. In this respect, the methodology of scientific research on drug crimes in modern criminology is undergoing a qualitative renewal.

An effective study of modern drug-related crimes yields superior results only when it is conducted not just with classical legal-statistical approaches, but also on the basis of interdisciplinary, evidence-based, digital, and prognostic methods.



Main Part

In modern criminology, the study of crimes related to narcotic drugs and psychotropic substances is becoming increasingly complex. This complexity is primarily explained by the organizational forms of drug crimes, their covert mechanisms, transnational connections, reliance on digital communications, and the expansion of their social base. Whereas in the past, drug crimes were more associated with traditional methods of trade and clandestine distribution, at the present stage, they are taking on a more sophisticated nature.

Of course, the role of classical methods in the study of drug-related crimes cannot be denied. Methods such as statistical analysis, legal characterization, the study of criminal case materials, surveys, and interviews still retain their importance [4]. However, in modern conditions, these methods often only record the external signs of drug crimes and are incapable of fully revealing their internal network-like structures, hidden connections, socio-psychological determinants, and territorial dynamics. For example, simple statistical data may show an increase in the number of drug-related crimes in a certain region, but it does not provide a complete picture of why such an increase is being observed in that specific area, which social groups are at risk, what communication channels are being used for illicit trafficking, or what new forms this process is taking.

Therefore, to study modern drug-related crimes, it is necessary not only to describe them but also to conduct in-depth analysis, develop scientific models, assess risks, and foresee potential changes.

It is precisely at this point that an **interdisciplinary approach** emerges as one of the most significant methodological advantages of modern criminology. Drug-related crimes are simultaneously legal, social, psychological, economic, medical, and information-communication phenomena. Therefore, their complete study is not possible within the framework of a single

discipline [5]. While jurisprudence explains the legal nature of crime and accountability mechanisms, sociology reveals the connection between drug crimes and the social environment. Psychology analyzes drug addiction, motivation, and deviant behavior; pedagogy studies risk factors among minors and youth; economics explains the illicit market and the chain of interests; and information technology helps to identify hidden networks in the digital environment. Such a comprehensive approach makes it possible to understand drug crimes not superficially, but in conjunction with their real mechanisms.

One of the most effective directions for scientific research on drug crimes in modern criminology is the **evidence-based approach**. This approach, known as evidence-based criminology, entails developing scientific conclusions and practical recommendations based on verified empirical data rather than subjective assumptions or general perceptions [7]. This is especially important in the field of drug crimes, as most of these offenses are latent, flexible, and rapidly changing in nature. For this reason, it is necessary to jointly analyze official statistics, sociological surveys, anonymous monitoring, criminal case materials, recidivism cases, risk signals in the youth environment, medical and social data, and regional differences. The advantage of an evidence-based approach is that it moves the fight against drug crime away from an emotional or generalized response, transforming it into a management model based on specific facts and indicators.

In such studies, the method of **risk assessment** is of particular importance. In drug-related crimes, risk is formed not only after the crime has been committed but also through a combination of preceding social, psychological, and territorial factors. Therefore, the risk assessment method allows for the identification of at-risk groups, vulnerable areas, population segments with increased social deviation, environments with a growing interest in narcotics,



and individuals with a high probability of recidivism [12]. The strength of this method is that it reinforces a proactive, rather than reactive, approach. That is, it is not limited to response measures after a crime has occurred but enables the early detection of the likelihood of a crime and the ability to influence it. This method is especially effective in studying susceptibility to narcotics among young people, analyzing dangerous content disseminated via the internet, and monitoring warning signs in the social environment.

Another important direction of modern criminology in the study of drug crimes is **digital criminology**. Today, a significant portion of the drug trade and distribution has moved into the virtual space [6]. Anonymous messengers, encrypted correspondence, darknet markets, covert coded advertisements on social networks, the geolocation-based “dead drop” system, and payment methods using crypto-assets have fundamentally changed this field. As a result, relying solely on traditional observation methods in the study of drug crimes is scientifically insufficient. Digital criminology focuses on studying activity in the internet space, the structure of online networks, virtual behavior, digital footprints, and hidden communications, making it possible to understand the real configuration of modern drug crimes. This method is especially important when researching the mechanisms of new-generation drug trafficking.

In this context, **network analysis** is also emerging as one of the new methods for studying drug crimes. Drug-related offenses are often committed not as the activity of a single individual, but in the form of a clandestine network between interconnected entities, intermediaries, suppliers, distributors, financial facilitators, and consumers [10]. Network analysis makes it possible to determine the configuration of these connections, identify central figures, distinguish peripheral participants, and assess the intensity of the connections. While the classic investigative approach often emphasizes an individual or a

single episode, network analysis helps to view the crime as an entire system. This is crucial not only from a scientific standpoint but also for improving practical prevention and detection mechanisms.

Among modern methods, conducting **territorial monitoring and forming criminological maps** hold a special place. Drug-related crimes do not manifest uniformly across all regions. Some areas become risk zones due to their proximity to transit routes, others due to a high concentration of socially vulnerable populations, and still others because they are environments where young people gather, entertainment venues, or places with weakened oversight. GIS-based mapping, a method utilizing geoinformation systems, helps to identify the territorial distribution of drug crimes, their concentration in time and space, risk hotspots, and logistical routes [8,9]. Through this method, drug crimes can be viewed not just as general statistics, but as a specific territorial configuration. As a result, preventive measures also become precise and targeted.

The method of **criminological forecasting** is also becoming increasingly important in scientific research on drug-related crimes. Since the drug market is a highly dynamic, rapidly adapting system capable of responding immediately to new situations, studying it through retrospective analysis alone is insufficient. The forecasting method allows for the development of potential future scenarios based on specific trends, risk indicators, demographic changes, digital activity, regional differences, and previous dynamics [11]. The advantage of this is that scientific research begins to answer not only the question, “What happened?” but also, “What might happen in the near future?” This is crucial for proactively planning strategies against drug crime.

Furthermore, **socio-psychological assessment methods** are of particular importance in the study of drug-related crimes. Addiction or interest in narcotic substances is often linked not only to criminal gain but also to psychological instability, identity crises, stress, peer pressure, family problems,



social exclusion, and a lack of purpose in life [13]. Therefore, to effectively research drug crimes, methods such as psychological diagnostics, motivational analysis, the study of behavioral indicators, and assessment of social adaptation levels are necessary. This is of great scientific and practical significance, especially for applying preventive measures and the early identification of at-risk groups among youth.

At this point, a critical issue comes to light: no matter how **advanced modern methods** may be, they may not yield the expected results if they are not adapted to national conditions. Every state has its own unique legal system, social environment, demographic composition, institutional capacities, and criminogenic situation. For this reason, when applying modern criminological methods to research on the prevention of drug-related crimes, the real conditions of Uzbekistan, the specific characteristics of its youth environment, its geographical location, its institutions of social control, and its information space must be given special consideration. Only an adapted approach can transform scientific results into practical value.

Several priority areas can be identified to increase the effectiveness of research aimed at preventing drug-related crimes in the context of Uzbekistan. First, it is necessary to strengthen the interdisciplinary foundation of the research. Second, alongside official statistics, there should be comprehensive use of empirical observations, surveys, data on youth environments, and the results of digital monitoring. Third, GIS mapping, a system of risk indicators, and forecasting models must be put into practice. Fourth, digital analysis methods specializing in the investigation of drug crimes committed via the internet and hidden networks need to be developed. Fifth, it is essential to form clear mechanisms for integrating research findings into prevention programs, educational institutions, the mahalla system, and administrative decisions. Only then will scientific research become a tool that has a tangible impact on real life.

The analysis conducted shows that in modern criminology, using new methods and approaches to study crimes related to narcotic drugs and psychotropic substances can significantly increase the effectiveness of scientific research. Above all, the results confirmed that drug crime now manifests as a multi-layered and constantly transforming phenomenon that can no longer be explained solely by a criminal-legal description. For this reason, while traditional statistical and descriptive approaches are useful to a certain extent in studying them, they cannot fully reveal hidden connections, digital communications, risk groups, socio-psychological determinants, and transnational networks. This situation demonstrated that the need for new methods has moved from being a theoretical issue to a practical necessity.

The research findings also indicated that no matter how advanced modern methods may be, adapting them to national conditions is a crucial issue. During the discussions, the view that mechanically adopting foreign models is not always effective was reinforced. This is because Uzbekistan's legal environment, community relations, the mahalla institution, population composition, youth environment, and information space all have their own unique characteristics. Therefore, modern methods and approaches – especially digital analysis, risk indicators, territorial monitoring, and preventive forecasting mechanisms – will be highly effective when they are implemented in a way that is adapted to local needs and capabilities.

The summarized results showed that in modern criminology, new methods and approaches for scientific research against drug crime are not separate, isolated tools but rather form an interconnected, complex system. The true mechanisms of drug crime can only be deeply revealed when interdisciplinary analysis, an evidence-based approach, digital monitoring, network analysis, territorial mapping, risk assessment, and forecasting are all applied together. Consequently, increasing the effectiveness of



this field is not about introducing a single method, but about modernizing the entire research model.

In general, new methods and approaches in scientific research on drug crime within modern criminology are elevating this field to a new level. They allow drug crime to be viewed not as an accomplished fact, but as a dangerous, covert, networked, and evolving social process. Most importantly, these methods shift the fight against drug crime from a punishment-centered model toward one of prevention, risk assessment, scientific diagnosis, and evidence-based governance. In this sense, new methods are not only a scientific innovation but also an important element in ensuring practical security.

Conclusion. This article provides a theoretical and practical analysis of new methods and approaches used in scientific research on drug-related crime within modern criminology. The analysis demonstrates that crimes involving narcotic drugs and psychotropic substances are no longer simple criminal phenomena. Instead, they manifest as a complex socio-legal process that is highly adaptive, covert, networked, intertwined with the digital environment, and increasingly transnational in nature. Consequently, it is argued that relying solely on traditional legal and statistical approaches for their study is insufficient, both from a scientific perspective and in terms of practical effectiveness.

The research findings confirm that interdisciplinary, evidence-based, digital, analytical, and prognostic approaches are paramount for the effective study of drug-related crime in modern criminology. Specifically, research that integrates jurisprudence, sociology, psychology, pedagogy, economics, and information technology enables a deeper understanding not only of the overt manifestations of drug crimes but also of their internal mechanisms, social roots, at-risk groups, and developmental trends. This indicates that modern criminological research is transitioning from a classical descriptive model to a new stage focused on scientific modeling

and predictive risk assessment.

One of the key conclusions substantiated in this article is that evidence-based criminology should be the central methodological principle in scientific research on drug-related crime. Because drug crimes are often covert and highly latent, scientific conclusions about them are reliable only when based not just on official statistics, but on a comprehensive analysis of multi-source empirical data, sociological observations, territorial monitoring, recidivism cases, risk signals within youth communities, and digital footprints. Thus, the robustness of the evidence and empirical foundation becomes a primary criterion for the scientific outcome when studying modern drug-related crime.

At the same time, the analysis revealed the sharply increasing importance of digital technologies and analytical tools. Methods such as digital criminology, network analysis, geoinformational mapping, territorial monitoring, criminological forecasting, and risk assessment have proven to be particularly effective in uncovering new forms of drug-related crime. Using these methods, drug crimes can be studied not as isolated episodes or recorded offenses, but as an integrated process involving dangerous connections, covert logistics, territorial concentration, social vulnerability, and digital activity. This enhances the effectiveness of the research not only theoretically but also practically.

The article also scientifically substantiates another crucial aspect: in research against drug-related crime, it is essential not to simply copy advanced methods but to adapt them to national conditions. This is because every state has its own unique legal system, social environment, demographic composition, cultural characteristics, and criminogenic situation. It has been shown that in the context of Uzbekistan, the most effective approach to increasing the efficacy of scientific research on drug-related crime is to implement modern methods and techniques while considering the specifics of the mahalla environment, youth policy, regional



differences, institutions of social control, and the national characteristics of the digital space. Therefore, an adapted methodology is one of the main prerequisites for achieving high scientific and practical impact.

Based on this article, the following scientific conclusions have been formulated:

- first, modern drug-related crimes, due to their covert, networked, transnational, and digital nature, must be studied using new scientific methods and approaches;
- second, interdisciplinary, evidence-based, and prognostic approaches provide the highest effectiveness in scientific research on drug-related crime;
- third, digital criminology, risk assessment, network analysis, territorial monitoring, and socio-psychological evaluation should form the

methodological foundation of modern research;

- fourth, in the context of Uzbekistan, adapting these methods to national needs and capacities is the primary factor in enhancing their practical effectiveness.

In conclusion, the introduction of new methods and techniques for scientific research on drug-related crime within modern criminology is not only a demand of scientific progress but also a necessary condition for ensuring public safety, preventing such offenses, and improving the quality of administrative decisions. When these studies are organized based on modern methodology, they transform into a strategic resource for combating drug-related crime, providing results that are not random or superficial, but rather deeply evidence-based, targeted, and sustainable.

Foydalanilgan manbalar / References

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