



Research on Situational Prevention of Drug Crimes from the Perspective of Big Data Based on SPSS Software

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Abstract. Due to the complexity, concealment, and intelligence of drug crimes, traditional social prevention, penalty prevention and other measures are difficult to effectively deal with. The advent of the era of big data has brought opportunities for the prevention and control of drug crimes. The track, record, and analytical functions of big data can realize effective management of drug-related personnel information, which is conducive to accurately grasping the law of criminal behavior and development and establish relevant predictive models, so as to do a good job in the prevention of drug crime situations in a targeted manner. This article combines big data methods and uses SPSS software to perform data statistics, summarizes the social and physical situation factors of drug crimes, uses the relevant thinking of big data thinking, comprehensively analyzes the situation factors, and summarizes the mechanism of the situational factors of drug crimes and constructs crime prediction model; in view of this, a drug crime situation prevention strategy based on big data technology is proposed, and a drug crime situation prevention model is constructed to improve the pertinence and accuracy of drug crime situation prevention.

Keywords: big data · drug crimes · situational factors · crime mechanism · situational prevention

1 Introduction

The problem of drug crime is complex, concealed, and stubborn. It is a worldwide problem. It not only severely affects personal lives, but also causes serious harm to society. According to the “2019 World Drug Report”, about 270 million people in the world take drugs each year, nearly 35 million people become addicted, and nearly 600,000 people die directly from drug abuse [1]. It can be seen that the drug problem is still spreading in society, and the anti-drug work is facing tremendous pressure and severe challenges. In order to eliminate this problem, the society has taken various measures to severely crack down on it, but the results are not satisfactory. The reason is that the existing penalty prevention and social prevention measures cannot fully meet the actual needs of preventing drug crimes.

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Based on the reflection on the traditional crime reason theory and prevention theory, crime situation prevention is to permanently and organically change the situation through confirmation, management, design, adjustment, etc., to influence the rational choice of offenders, to reduce crime opportunity situational factors and contributing situational factors, so as to achieve the purpose of crime prevention [2]. The focus of this theory is to answer “under what circumstances are people most likely to commit crimes”, and then take measures to prevent such crimes [3]. By taking targeted measures to reduce the situational factors that induce criminal motives and limit the conversion of criminal opportunities to criminal behaviors, many crimes with multiple characteristics can be avoided or reduced immediately [4]. This is a new and unique perspective of crime prevention.

Drug crime, as a frequent crime, has the characteristics of relatively concentrated criminal groups, the criminal motives are easily affected by the external environment, the regularity of the temporal and spatial distribution of crimes. To a certain extent, it is in line with the idea of situational prevention, and it is suitable to analyze the situational factors of drug crimes, explore the mechanism of situational factors, and then control the situational factors to prevent the action path of situational factors, thereby avoiding the occurrence of drug crimes, so as to achieve the preventive effect. At present, with the continuous upgrading and breakthrough of science and technology, the application scope of information technology has been further expanded, and the application of big data in crime situation prevention has become more and more extensive. Through big data analysis, it is possible to more accurately grasp the law of drug crimes, establish predictive models, and prevent crimes.

Therefore, this article applies the situational prevention theory to drug crime prevention from the perspective of big data, which can not only change the same preventive thinking in the past, so as to provide an innovative prevention perspective, but also use big data to analyze the situational factors that affect the occurrence of drug crimes in real life, constructing practical prevention scenarios in a targeted manner can better achieve the goal of changing the current situation of drug crime prevention. Generally speaking, it has important theoretical and practical significance for the prevention of drug crimes.

2 Research Design

2.1 Data Sources

The research team has reached the public security bureaus, drug rehabilitation centers and community drug rehabilitation centers of HY, YZ and XT in H Province, and obtained relevant research data through field questionnaire surveys, interviews and field observations.

About field questionnaire survey: 1,000 drug-related persons were randomly selected in the drug rehabilitation center of the survey area, 1,000 questionnaires were distributed, and 1,000 copies were actually collected. About on-site interview: discuss with front-line anti-drug police officers to understand the actual situation of drugs and actual problems in the prevention of drug crimes; to understand the factors that make them participate in drugs by asking drug users. About field observation: observe the community drug rehabilitation workstations and drug control publicity and education bases in the surveyed

area, and understand the location characteristics, facilities and equipment, management and effectiveness of the community workstations and drug control education bases.

After the survey, SPSS21.0 was used to input, count and analyze the questionnaire data, and organize the collected text data.

2.2 Research Steps

The first step is to summarize the situational factors of drug crimes through empirical investigations and statistical analysis of data, which are mainly divided into two parts that affect the generation of motivation and the transformation of motivation into behavior. The second step is to analyze the mechanism of the situational factors of drug crimes using big data relevance thinking, and construct a general theoretical model. The third step is based on the occurrence mechanism of drug crimes, finds out the key nodes in the formation of crime situations, and puts forward the ideas and models of drug crime situation prevention based on cutting off the crime situation.

3 Results and Discussion

3.1 Situational Factors of Drug Crime

In order to reveal the development process of drug crimes from scratch, the author clearly explains how the situational factors of drug crimes affect criminal motives and criminal behaviors. By distinguishing between social situational factors and physical situational factors, the process of forming motives for drug crimes and transforming motives into behaviors under the influence of situational factors is presented step by step.

- 1) Social situational factors: They are closely related and directly related to the individual, and can influence and induce the individual to produce psychological motives.
 - a) *Basic life background factors:*

The basic situation of drug criminals: 55.0% of drug criminals from rural areas, they are mainly under 25 years of age, 69.0% have primary and secondary education, and most of them are unmarried, and 77% have an average monthly income of less than 6,000 yuan.

Family environment: 70.0% of drug criminals had family disharmony and incomplete structure before drug involvement. This can easily cause their children to fall into anxiety, cruelty, rudeness and other bad mental stereotypes, which triggers the criminal motive of taking drugs as a "liberation". 59.0% of drug criminals rank as the smallest or only child at home. Individuals tend to breed arbitrary criminal motives in a spoiled environment. 52.0% of drug criminals' parents' occupations are low- and middle-income occupations. When the material is difficult to meet the needs, there will be obstacles to the overall development of the family's children personality, which can easily lead to the emergence of anti-social personality, such as the use of drug trafficking to obtain money and other materials.

Residential area environment: 71.0% had drug-related persons in the residential area where they were before the drug-related involvement. The existence of undesirable factors in the residential area can easily form appeal to others. 53.0% had no anti-drug propaganda in their residential area before drug involvement. 54.0% of drug offenders have indifferent relations with their neighbors. Residents do not care about and contact each other, which is easy to form social blind spots, weaken the regional control and surveillance in social relations, and strengthen the formation of the perpetrator's criminal motives.

- b) *Life event factors*: 73.0% of drug criminals often witnessed others taking drugs before they were involved in drugs, and 85.0% were with friends when they first involved in drugs. It can be seen that the perpetrator is easily stimulated by the bad interpersonal environment in the bad friendship circle, and produces drug crime motives.
- c) *Interpersonal factors*: 82.0% of drug criminals have experienced major life events before being involved in drugs, mainly in the areas of emotional frustration and family changes. They are often subjected to various pressures, conflicts, difficulties, etc. If they do not find the right solution, they will easily develop criminal motives and turn to "drugs" to paralyze themselves.
- 2) *Physical situational factors*: They refer to the specific external situation when the motives of drug crimes are transformed into drug crimes.
 - a) *Target factors*: 80.0% of the types of drugs that drug criminals first contacted and frequently contacted were new types of drugs such as methamphetamine and K powder. These new drugs have great irritating side effects on people's physical and mental health, and make people perform various behaviors that are difficult to control.
 - b) *Time and space factors*:

Time factors: The months when drug criminals are most exposed to drugs are July and August. At the time of the high temperature, people's mood is easily affected by the seasonal weather and agitated. Followed by November-December and January-February. Mainly because the end of the year is approaching, and during the Spring Festival, there is a large population flow, and each other is easily affected. The specific time when 69% of drug criminals first came into contact with drugs was 20:00–24:00. This is because people's spiritual activities are weaker at night and are easily affected by external situations. There are fewer people in the block and less surveillance from the outside.

Spatial factors: Realistic spatial factors: More than 80.0% of drug crimes mainly occur in hotels, private houses, entertainment venues, etc. These venues have the characteristics of closedness and concealment in space, and are relatively isolated from the outside world, which facilitates the development of criminal activities. *Cyberspace factors*: The Internet has the characteristics of fast dissemination of information, wide coverage, and no time and space restrictions, making drug crime activities highly trans-regional, providing convenient conditions such as concealment, speed, and reduction of crime risks for drug crime activities.

- c) *Social control omission factors*: One is the imperfect legal system. There are still lags and deficiencies in current laws and regulations for combating Internet drug-related criminal activities. The second is the ineffective supervision of key links. Our country has insufficient control over chemically synthesized drug raw materials; delivery inspection and logistics inspection in logistics delivery are mere formalities; a sound and efficient patrol system has not yet been formed in areas with high incidence of drug-related sites. The third is that the internal management of high-incidence places for drug crimes is loose, drug-related personnel are easy to hide here, and drug-related behaviors are easy to breed here; anti-drug publicity and education have problems such as insufficient coverage and insignificant effects, resulting in weak public awareness of anti-drugs.

3.2 The Mechanism of Situational Factors in Drug Crimes

Like other social behaviors, drug-related crimes are a specific response of individual personality to external situations, and they also follow the general social psychological model of “stimulus-response” [5]. In other words, only under the influence of specific situations can individuals have a clear drug-related motive and transform this motive into actual behavior. The situation in which the perpetrator is placed is the result of the role of situational factors in drug crimes. Exploring this mechanism of action is conducive to grasping the specific process of drug crimes, thus making prevention more targeted.

- 1) *The Theoretical Model of Drug Crime Situational Factors Affecting Crime Occurrence*: On the basis of describing empirical data and explaining and analyzing the mechanism of situational factors, a theoretical model of the role of situational factors in drug crimes is constructed (Fig. 1).

- 2) *Analysis of the theoretical model*:

The theoretical model of the situational factors of drug crimes influencing the occurrence of crimes constructed by the author is a vertical structure, and the development thread from top to bottom is stimulus-need-motivation-behavior. The direction of the arrow indicates influence and effect. In a nutshell, the life background environment stimulates needs, needs to be strengthened in interpersonal communication, and forms motivation under the influence of life events. Target factors clarify motivation, time and space factors strengthen motivation and gain momentum, and social control omissions promote the transformation of motivation into behavior.

Specifically, the model takes the formation of criminal motives and the transformation of motives into behaviors as the two key nodes, and these two nodes appear under the stimulus of the external situation. Of course, this does not mean ignoring criminals completely, but to reduce their importance, only as a subject participating in the criminal situation. This also explains that the individual in the model has experienced the transformation from person to potential criminal (criminal motive) to actual criminal (criminal behavior) under the stimulation of the external situation.

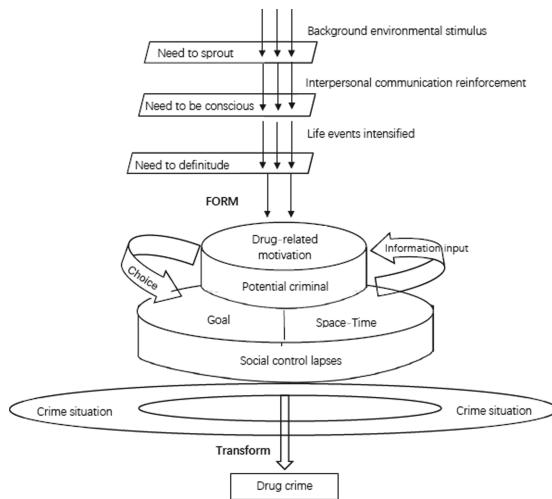


Fig. 1. The Theoretical Model of Drug Crime Situational Factors Affecting Crime Occurrence

Before the criminal act occurs, the various situational factors that stimulate or promote the emergence and development of criminal motives interact with each other, and the scene they combine to form is the criminal situation.

3.3 The Path of Situational Prevention of Drug Crimes

Situational prevention theory focuses on the study of criminal behavior, but it does not ignore the status and role of the perpetrator in the crime, but regards the perpetrator as a participant in cognition and evaluation of the situation. Therefore, while the objective situation has an effect on the perpetrator, the perpetrator can also use his subjective initiative to change or choose the situation. Specifically, we can design the external environment that the perpetrator thinks is not conducive to the crime. By changing the conditions of interpersonal, location, social control and other factors to strengthen the perpetrator’s subjective awareness of “cannot commit or not easy to commit”, so as to prevent the occurrence of crime or reduce the crime rate.

1) *The Theoretical Model of Situational Prevention of Drug Crimes:* By exerting control over the situational factors that affect the formation of criminal motives and the occurrence of behaviors, a theoretical model that effectively inhibits the role of situational factors in drug crimes is constructed to achieve the purpose of effectively preventing drug crimes (Fig. 2).

2) *Analysis of the theoretical model:*

This theoretical model is also a vertical structure, which is divided into two parts from top to bottom. One is to suppress the formation of criminal motives, and the other

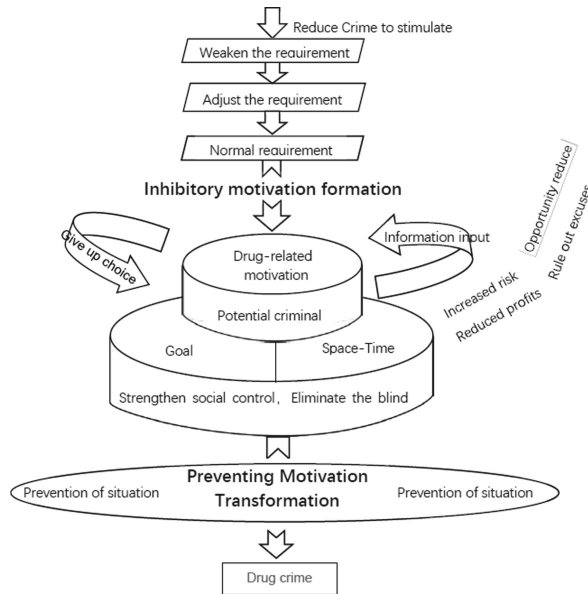


Fig. 2. The Theoretical Model of Situational Prevention of Drug Crimes

is to prevent existing criminal motives from transforming into behavior. The connected arrows point to influence and effect, and the split arrows indicate interruption and success in prevention.

Specifically, the key to suppressing the formation of criminal motives is to take measures to prevent individual needs from intensifying and maintain normality. It mainly focuses on the situational preventive measures to reduce criminal stimulus, through reforming the life background, guiding individuals to live a healthy life, and weakening unhealthy needs; intervening in interpersonal communication to eliminate the adverse effects of peer pressure; reducing life stimuli and adjusting needs to make them normal.

Before the individual commits a criminal act, situational prevention is also particularly critical. Eliminate blind spots by controlling physical situation factors such as targets, time and space, and social control omissions, so that it can deliver information that is not easy to succeed and is not conducive to crime, such as increased risks, reduced opportunities, reduced profits, and excluded excuses, thereby affecting the choice of potential criminals, So that they “cannot commit or dare not commit” and give up committing criminal acts.

In general, situational prevention of drug crimes is also to grasp the two key nodes of motivation formation and the transformation of motivation into behavior. By changing the crime situation, the situational prevention measures are taken to restrain the formation of motivation and prevent the transformation of motivation to achieve the purpose of prevention. The specific situational preventive measures can be empirically applied based on actual situational factors, and continuously improved based on the analysis of the effects of big data.

4 Conclusion

This article first uses statistical analysis of empirical data to find out the external situational factors that influence the formation of criminals' motivations and transform their motivations into behaviors: including factors that affect the target population's use of drugs and the "demand" for drug crimes; the factor that transformation of "demand" into criminal motives is the "guilty factor"; the external factor that promotes the transformation of motivation into behavior is the "catalytic factor". Secondly, it specifically analyzes how the factors that induce the engine and the situational factors that promote the transformation of motivation into behaviors interact to form a crime situation, reveal the evolution of drug crimes, use model theory to explore the micro-crime generation mode of drug crimes, and build the mechanism of drug crimes general model. Finally, this article finds out the key nodes in the formation of crime situations, and constructs a theoretical model of drug crime prevention situations. The research results of this article can be transformed into the reference basis for drug crime management practice, and achieve the effect of generalization. It has strong theoretical and practical significance for preventing and reducing drug crimes and maintaining social harmony and stability.

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