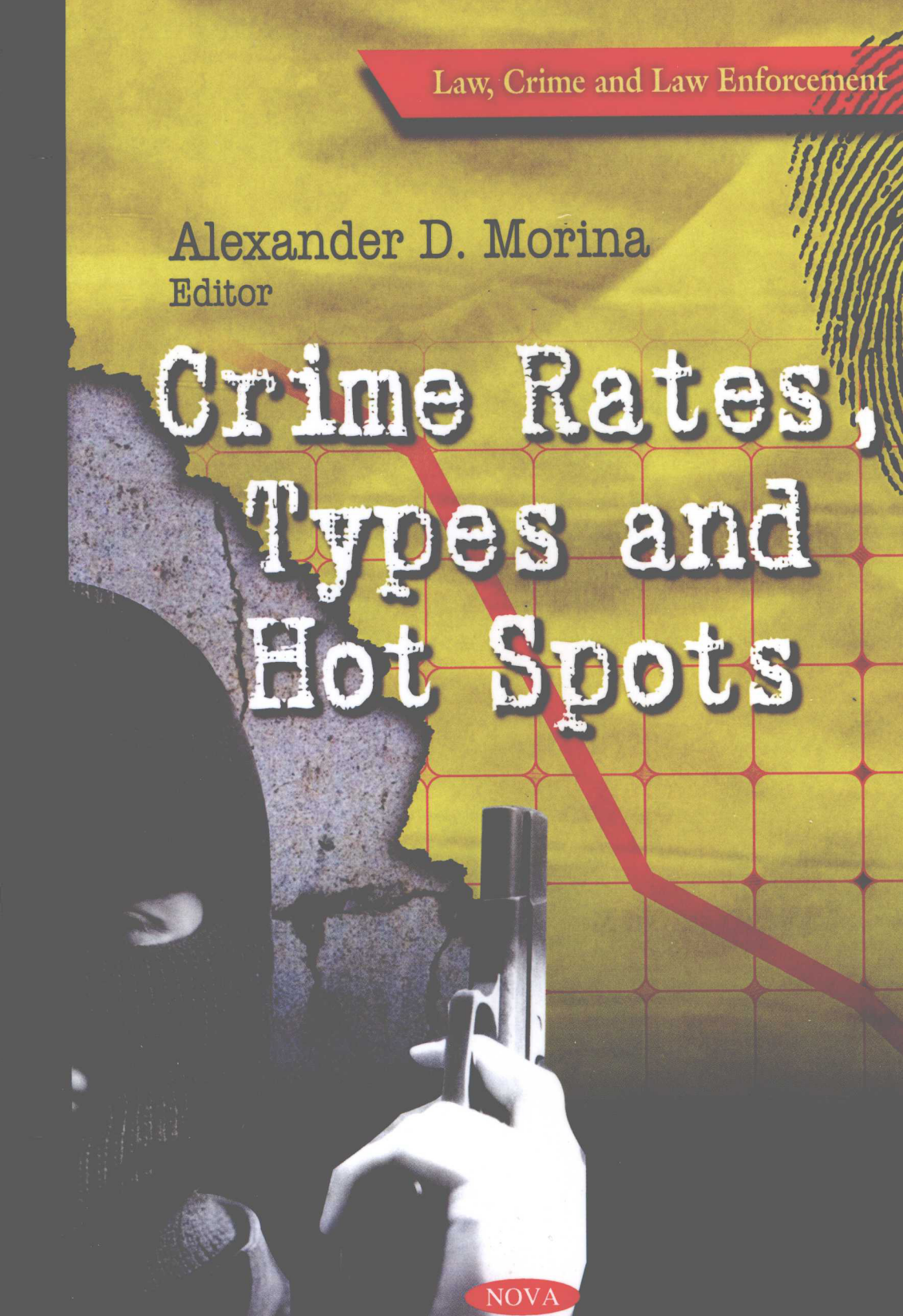
Law, Crime and Law Enforcement

Alexander D. Morina
Editor

Crime Rates, Types and Hot Spots



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LAW, CRIME AND LAW ENFORCEMENT

CRIME RATES, TYPES AND HOT SPOTS

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PREFACE

In this book, the authors present current research in the study of crime rates, types and hot spots. Topics discussed include a forensic and social approach to drug facilitated crimes; violent crime in South Africa and apartheid; institutional corruption and "fixers"; ambient population data as a denominator in crime rates and identified hot spots; white collar crime in Sweden and law enforcement and digital crime.

Chapter 1 - Drug abuse refers to the hazardous or harmful use of illicit drugs like marijuana or cocaine, morphine, etc. and also prescription or non-prescription (over-the-counter) drugs. These drugs affect the Central Nervous System as a depressant or stimulant. The most commonly abused drugs may be classified in 5 or 6 groups such as *hallucinogens* (cannabinoids, LSD, magic mushroom-psilocybin, etc.), *depressants* (benzodiazepines, barbiturates, GHB etc.), *dissociative anesthetics* (ketamine, phencyclidine, etc.), *opiates* (morphine, heroin, fentanyl, etc.), *stimulants* (amphetamine derivatives-MDMA-methamphetamine-methylphenidate, cocaine, etc.), *inhalants* (solvents-paint thinners, propane, etc.). Some of them are widely controlled, illicit or prescribed for therapeutic indications. The long-term and repeated substance usage can lead to psychological and/or physical dependences which cause a public health problem. Drug abuse and dependence play a role in many major social problems and crimes, such as missed work, drugged driving, violence, child abuse, sexual assault, robbery, etc. Especially in metropolises and touristic zones, rates of crimes offended under the influence of drugs are higher than others. Some of its reasons may be the ease of providing cheaper drugs, the large number of the sellers, quite a number of people who recognize the drugs in advance and the vast population of the metropolises.

The Republic of Turkey is uniquely located at the political and cultural crossroads of Europe and Asia. According to the Turkish Statistical Institute,

Turkey's population was 72 million in 2009. Largely as a result of this geographical position, Turkey also has been and continues to be a major transit route for opiates originating from east to west and of synthetic drugs like Ecstasy from west to Middle East. Almost all researches in Turkey indicate cannabis as the most frequently used drug. The use of inhalants, psychoactive substances (synthetic opiates) and heroin follow cannabis in terms of frequency of use. There is also anecdotal information suggesting the increasing use of Ecstasy among young people in urban centers.

Drugs and drug usage have become important problems for Turkey in recent years as for the world. There are also increases in drug-related crimes, in the number of suspects taken into custody and in the amount of drugs seized over the years. In light of all this information about crimes caused by drugs, forensic and social evaluation will be presented in this chapter

Chapter 2 - The crime of apartheid (1951 – 1994) was predicated on the use of politicized and opportunistic violence to subdue and suppress the majority Black population of South Africa. Local researchers suggest that under such a maelstrom of oppression a 'subculture of violence' was inculcated into Black South African society during this period. This so-called 'subculture of violence' excuse has been extensively used to explain the country's phenomenally high violent crime rates. This study used a series of models to test these subcultural explanations of violent crime trends in post-apartheid South Africa. Racial as well as regional subcultures of violence were investigated. The analyses yielded no support for a subculture of violence amongst the Black population of the country and rather highlighted the importance of understanding the nature of historical context when explicating communities and their culture.

Chapter 3 - The ability of actors and non-actors to influence truthfulness judgments of their statements was investigated. Students judged the truthfulness of true and false statements made by actors and non-actors. The actors were considered more truthful when they were lying, whereas the non-actors were considered more truthful when they told the truth. Analysis of actors' and non-actors' behavior indicated that lying actors produced full (felt) smiles and suppressed half (feigned) smiles. Actors also suppressed bodily movements in making both truthful and false statements. It was suggested that actors were able to suppress behavioral cues that are erroneously believed to indicate deception.

Chapter 4 - Fixers are ubiquitous, fostering institutional corruption and eroding public trust in government of developing as well as of Western political democracies. Paradoxically, the academic research of the forces upon

which the phenomenon of "fixers" feeds itself, the "modus operandi" of fixers, the economic strain they put on individual and societal resources, and their negative effect on public integrity mainly in democratic governments, is still in its infancy. Most of the existing literature can best be described as a body of inconsistence— descriptive studies that loosely attempt to theorize on the general phenomenon. In an attempt to begin to understand the phenomenon of fixers more theoretically and less descriptively this chapter uniquely analyzes the phenomenon of fixers in view of three theories of bureaucratic corruption: "network economy" theory; "spillover" effect theory of corruption; and 'revisionist-functional' theory of corruption. The chapter suggests a theoretical framework for a typology of fixers, styles of their operation, the dynamics of the interface between them and civil servants, and policy measures to control the scope and negative effects of the phenomenon of fixers.

The importance of studying the phenomenon of fixers, from the point of view of the international literature, emerges from its unique position as a major branch of mediation (including lobbying activity) in the one hand and as an important transmission mechanism to corruption on the other hand. Israel was chosen to demonstrate the subject of this chapter mainly because of the fact that, according to international indexes, the country's status as a civil society has declined significantly over the past decade. According to the corruption index of Transparency International, Israel was ranked 30th in the world, at 2010, one of the lowest among the Western countries, having fallen from 14th in 1995. Using Israel as a case in point, the chapter shows that within certain national and local branches of government, fixers become as pervasive as to constitute a fear of creating a shadow copy of official institutions

Chapter 5 - When comparing amounts of crime over time, Criminologists frequently calculate "crime rates" by taking crime totals for a particular community and dividing them by the population size. Population size is typically based on census data for a particular geographical area. Although the census provides a gross estimate of the population living in a given area, it fails to account for the potentially large ambient populations travelling through it. As suggested by Routine Activity and Crime Pattern theory as well as recent work by Andresen, using an inappropriate denominator for these rates can have a profound impact on the identification of crime hotspots and in some instances may grossly misrepresent the extent of specific crime problems. In this chapter we employ geo-coded police data as well as LandScan, a global population database, to illustrate how, by using ambient population as an alternative denominator, crime rates and identified hotspots for a variety of crime types at the same location, can vary considerably from

those using traditional census-based crime data. We show how differences depend not only on the crime examined and time of day but also on the specific activities occurring in the area on any given day such as the ambient population increase associated with football match attendance. The resultant implications for law enforcement strategy and resource deployment are discussed. Basic guidelines for making informed decisions regarding which denominator is appropriate for a given crime problem or local area are suggested.

Chapter 6 - The white collar criminal rate in Sweden has moved up and down during the period 1975 to 2009, on a level of 10,000 reported cases annually until 1995, when it dropped to about 5,000-7,000 reported cases from 1999 to 2005, and then suddenly increased from about 7,300 reported cases in 2006 to 36,145 reported cases in 2009—an increase of nearly five times in just a span of four years! What happened? The investigation is done using a rather new theory (the theory of crime-as-choice, created originally by Neal Shover), which is basically from a policy perspective where the empirical material is the official documents from law enforcement and regulatory agencies and the actions these agencies have made during the first decade of the 21st century on the issue of white collar crime

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Chapter 1

A FORENSIC AND SOCIAL APPROACH TO DRUG-FACILITATED CRIMES

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ABSTRACT

Drug abuse refers to the hazardous or harmful use of illicit drugs like marijuana or cocaine, morphine, etc. and also prescription or non-prescription (over-the-counter) drugs. These drugs affect the Central Nervous System as a depressant or stimulant. The most commonly abused drugs may be classified in 5 or 6 groups such as *hallucinogens* (cannabinoids, LSD, magic mushroom-psilocybin, etc.), *depressants* (benzodiazepines, barbiturates, GHB etc.), *dissociative anesthetics* (ketamine, phencyclidine, etc.), *opiates* (morphine, heroin, fentanyl, etc.), *stimulants* (amphetamine derivatives-MDMA-methamphetamine-methylphenidate, cocaine, etc.), *inhalants* (solvents-paint thinners, propane, etc.). Some of them are widely controlled, illicit or prescribed for therapeutic indications. The long-term and repeated substance usage

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can lead to psychological and/or physical dependences which cause a public health problem. Drug abuse and dependence play a role in many major social problems and crimes, such as missed work, drugged driving, violence, child abuse, sexual assault, robbery etc. Especially in metropolises and touristic zones, rates of crimes offended under the influence of drugs are higher than others. Some of its reasons may be the ease of providing cheaper drugs, the large number of the sellers, quite a number of people who recognize the drugs in advance and the vast population of the metropolises.

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Keywords: Drug-Facilitated Crimes, Drug Abuse, Psychoactive Drugs, Forensic Toxicology.

ABBREVIATION LIST

APA= American Psychiatry Association
CNS= Central Nervous System
DFC=Drug-Facilitated Crime
DFSA= Drug-Facilitated Sexual Assault
DSM-IV = Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition
GC-MS= Gas Chromatography – Mass Spectrometry
GHB=Gamma hydroxy butyrate
HPTLC= High Performance Thin Layer Chromatography

LC-MS-MS= Liquid Chromatography – Tandem Mass Spectrometry
LSD= Lysergic Acid Diethylamide
MAM 3G= Morphine-3-glucuronide
MAM 6G= Morphine-6-glucuronide
NaF= Sodium Fluoride
NIDA= National Institute on Drug Abuse
PCP= Phencyclidine
SOFT=Society of Forensic Toxicologists
TCA= Tricyclic antidepressant
TSI= Turkish Statistical Institute
UN= United Nations
UNODC= United Nations Office on Drugs and Crime

This chapter describes drug (substance) abuse, presents information about crimes caused by drugs (Drug-Facilitated Crimes -DFCs), and describes some of the precautions that can be taken. It also provides suggestions to improve the collection of evidences in crime scenes and the analyses of biological samples collected from alleged victims of DFCs as well as to interpret the results of reports; a forensic and social evaluation will be presented in this chapter.

The term "substance" describes the illegal usage of a medicine, toxic substance or any drug according to APA (American Psychiatry Association) 1994 [1]. Drug abuse is an important social health issue that can be seen in all countries of the world (UN Report, UNODC report, NIDA Report) [2].

Drug (substance) abuse refers to the hazardous or harmful use of illicit drugs like marijuana or cocaine, morphine, etc., and also prescription or non-prescription (over-the-counter) drugs. All of these drugs affect the Central Nervous System as a depressant or a stimulant. Drug abuse is a serious problem for public health and many major social problems, such as drugged driving, violence, stress and assaults and also can lead to homelessness, crime and missed work or problems with keeping a job; it affects every community in the world. The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), published by the American Psychiatric Association (1994:182) refers to substance abuse as a *"maladoptive pattern of substance use manifested by recurrent and significant adverse consequences related to repeated use of substances. There may be repeated failure to fulfill major role obligations, repeated use in situations in which it is physically hazardous (such as driving while intoxicated), multiple legal problems, and recurrent social and interpersonal problems"* [3].

Substances directly affecting the CNS and that are used illegally are divided into three main groups as natural, synthetic or semi-synthetic substances. The most commonly used natural substances are marijuana, natural opioids (morphine, thebaine) obtained from *Papaver somniferum L.* species and cocaine. Heroin, obtained from morphine via semi-synthetic synthesis is also a substance that always has a high ratio of usage. One semi-synthetic substance is LSD (Lysergic Acid Diethylamine).

Substances described as synthetic or designer drugs seen in Table 1 are compounds highly preferred since their "precursors" are easily provided and can be produced in simple places such as kitchens and are low cost [2].

Marijuana, opioids, amphetamine derivatives, cocaine, phencyclidine, ketamine, GHB (Gamma Hydroxy Butyrate), benzodiazepines are among the most known psychoactive substances directly affecting the CNS and are used prevalently.

The term "Drug Related Crimes" is described as "Offenses in which a drug's pharmacologic effects contribute; offenses motivated by the user's need for money to support continued use; offenses connected to drug distribution itself" according to criminological documents [4].

Consuming psychoactive substances and the biological processes affect all human behaviors. As a result, the individual becomes the offender or the victim. The relationship between drug abuse and violence, assault, theft, robbery, traffic accident, running drugs, rape crimes are reported in the literature [1,5,6,7,8,9].

When a person abuses any drug or alcohol with drug, he/she may be subjected to a criminal act through the incapacitating effects of these substances; it is termed a drug-facilitated crime (DFC) [10].

The most common DFCs are sexual assaults, robberies, homicides and also drug smuggling have been committed by drug users [9,11,12].

The used substances that are considered as illicit [*opiates* (morphine, codeine, heroin, etc.), *hallucinogens* (cannabinoids, LSD, etc), *stimulants* (amphetamine derivatives, cocaine), GHB, phencyclidine], licit-prescription or over-the counter pharmaceuticals [*depressants* (benzodiazepines, barbiturates), and ketamine] for recreational or rave purposes. Offenders obtain the substance as "legitimate prescriptions" from their own friends or members of the family or via the "street" or "internet" [13]. According to a recommendation of the Society of Forensic Toxicologists (SOFT), there are over 50 drugs known or suspected to have been used to commit DFCs [14]. While pharmaceutical effects of these substances vary, most of them are CNS

depressants or stimulants. Not all are classic "sedatives" but may include a number of other drugs where sedation or amnesia is only a side-effect [12].

In DFCs, it is possible to encounter many evidences like substance residue, drug formulations, contaminated containers, etc., along with the biological evidences belonging to the offender or the victim in the crime scene. The findings, obtained by the examination of these evidences, resolve the case [12,15]. Color tests [16], immunological methods and screenings [17] with chromatographic methods like HPTLC [8], GC [18] are applied to the evidences according to their amounts and then the results are confirmed with GC-MS, LC-MS (MS-MS) methods [15,19,20,21].

The application of a good chain of custody and validated methods provides the expected contribution to justice, struggle against crime and drug abuse with a precise and reliable task.

SUBSTANCES

Club Drugs

Club drugs are loosely defined as a pharmacologically heterogeneous group of psychoactive compounds that tend to be abused recreationally by teens and young adults at nightclubs, bars, raves, dance clubs, or trance scenes. These drugs have a wide variety of pharmacological properties, but many are very potent, low-dose medications that cause CNS depression [22]. However, other drugs do not impair consciousness or memory function by lowering the user's inhibition. Common examples include Ecstasy (MDMA), meth-amphetamine, Flunitrazepam (Rohypnol), ketamine and GHB. All of these agents have been classified as controlled substances [23,24].

GHB, ketamine and Rohypnol also have been used to facilitate date rape or robbery due to their ability to sedate and incapacitate unsuspecting victims, preventing them from resisting the perpetrator. Club drugs have varying effects, and can be colorless, tasteless, and odorless and can be added to beverages and ingested unbeknownst to the victim.

Alcohol (Ethanol)

People have been making and consuming ethanol (alcohol) for a long time and ethanol is extensively used in the world currently. Alcohol is produced by

the fermentation of yeast, sugar and starch and found in beer, wine, and liquor. It is a CNS depressant and is rapidly absorbed from the stomach and small intestine into the bloodstream. Effects of ethanol result in impairment and alteration of behavioral actions of an intoxicated individual [12]. The general impairment induced by alcohol, as blood alcohol rises, includes weakened responsiveness, reduction of decision-making abilities, loss of judgment and control, reduced perception and awareness, impaired vision and auditory discrimination, interfering with a person's ability to give consent, amnesia and/or loss of consciousness, and these effects may be desirable to a sexual offender [22].

Alcohol affects every organ in the drinker's body and also a developing fetus. Intoxication can impair brain function and motor skills; heavy use can increase risk of certain cancers, stroke, and liver disease. During the metabolization, the ethanol converts to acetaldehyde by alcohol dehydrogenase [25]. A very small fraction (0.02—0.06%) of the consumed ethanol may also be converted to ethyl glucuronide which is an interesting and useful ethanol metabolite as it is only produced *in vivo* following ethanol consumption and is excreted in urine and a small fraction is incorporated into hair [25] and it is used as a biomarker for alcohol use in forensic cases [25, 26]. Ethyl sulphate and fatty acid ethyl esters (FAEEs) are the other biomarkers used for alcohol consumption [22].

Alcohol is the most common substance involved in DFCs either alone or in combination with other psychotropic drugs (sedatives, hypnotics, anticonvulsants, some antidepressants, tranquilizers, some analgesics, and opiates).

All of these have similar characteristics to incapacitate a person (victim) for the purpose of committing a crime. The alcoholic beverage can mask the taste of the drug, and depressant properties of alcohol combine with the drug to incapacitate the victim faster [14, 27]. In some DFCs, the victims most often consume the alcohol voluntary, and so, it is an advantage for perpetrators [12]. Alcohol is legal, readily available, and drinking alcohol, even in excess, is socially accepted, which facilitates the process of administration and also, alcohol consumption is frequent among perpetrators [12,28].

Numerous DFCs have occurred while the victim was under the influence of both alcohol and drugs [12]. Alcohol exerts potentiating or synergistic effects when ingested in the presence of such drugs and the enhanced intoxication of these drugs can occur with low levels of alcohol. Also, excessive alcohol consumption or overdoses of alcoholic beverages cause deaths both for the victim and the offender.

The other important problem is that the negative impact of alcohol on driving-related skills exemplifies the general impairment induced by alcohol [29,30].

Ketamine

The chemical name of ketamine, a phencyclidine derivative, is cyclohexylamine. Ketamine is used in humans and animals due to its anesthetic effect and is known as a dissociative agent [22,24]. Prescription ketamine is available as an injection formulation [31,32]. The clinical effects begin within minutes and last up to an hour. It is found in the form of liquid, white powder or pills. As with every abused substance, ketamine is also known with the street names of "K", "vitamin K", "Cat Valiums", fort Dodge, special K among the users [33,34]. It is odorless and tasteless. Ketamine is abused in clubs and other social situations. Theft of ketamine from veterinary clinics and animal hospitals is very common [31,32,35]. It is illegally used through inhalation, injection, smoked with tobacco or consumed orally by adding to foods and beverages. 1-2mg/kg IV dose results in sedation and anesthesia, its half-life is short and it is metabolized to norketamine then renally eliminated. When injected and inhaled, its effects are seen within 5-15 minutes and when it is used orally its effects are seen within 5-30 minutes. In low doses, symptoms of mild stupor, dizziness, robotic movements, hallucinations, decreased sensations, etc.; in higher doses difficulty in movement, nausea, amnesia, paranoia fainting, etc.; in high doses delirium, disruption of motor functions, increased blood pressure, depression and fatal respiratory problems occur. In hallucinations caused by high doses, perceptions of time, sound, color, personality may deteriorate. Since it leads to loss of consciousness and movement, it is used as a "rape drug" [24,36].

GHB (Gamma Hydroxy Butyrate)

GHB is an endogen substance that can be used by bodybuilders to stimulate the growth of muscles and can also be used in rave parties for the purposes of abuse. It is obtained from a chemical substance that is used to clean electric panels. While it can be found in the form of liquid or powder, it is also put on the market after being prepared in the form of tablet or capsule. "Liquid Ecstasy", "Vitamin G" are the most commonly used street names of the drug [33,34].