INTRODUCTION TO SUBSTANCE USE AND MISUSE

CHAPTER 1

OBJECTIVES

- Have an understanding of the global drug scene.
- Explain the meaning of the following terms: drug, alcohol, substance misuse, addiction, problem-drug use and problem-alcohol use, hazardous drinker, harmful drinker, severely dependent drinkers and drinkers with complex problems.
- Examine the components of concept of dependence: tolerance, physical and psychological dependence.

In the twenty-first century, there is no lack of interest in the use of psychoactive substances and plants. Alcohol and drug use remain the social and psychological fabric of our society and are now regarded as a public health problem. Society has learned to co-exist with drugs and alcohol, and its views of which drugs should be legal or illicit changes with time and economic and political considerations. For example, tea, coffee and tobacco have all been illegal in Britain at various points in history (Whitaker 1987), but with time, increasing availability and more widespread use opinions change, and the drug becomes ‘normalized’. Alcohol and drug use cause a host of physical, social, psychological and economic harms not only to the individual but to the family and the community. The harms include higher risks of premature death; risk of acquiring blood-borne virus such as hepatitis B and C and HIV; overdose; respiratory failure; and mental health problems. It is stated that drug problems will not be beaten out of society by yet harsher laws, lectured out of society by yet more hours of ‘health education’, or treated out of society by yet more drug experts (Royal College of Psychiatrists 1987).
GLOBAL DRUG SCENES

The growing epidemic of drug misuse appeared to have slowed down with ‘significant and positive changes’ in world drugs markets according to a report of the United Nation Office on Drugs and Crime (UNODC 2007). The Report shows that global markets for illicit drugs remained largely stable in 2005–6. There are signs of overall stability in the production, trafficking or consumption of cocaine, heroin, cannabis and amphetamines. About 5% of the world’s population, about 200 million, between the ages of 15 and 64 uses illicit drugs each year but only a small share of these can be considered ‘problem drug users’ (0.6%). The main problem of drugs at the global level continued to be the opiates (notably heroin), followed by cocaine. For most of Europe and Asia, opiates continued to be the main problem drug; in South America, drug-related treatment demand continued to be mainly linked to the misuse of cocaine; and in Africa, the bulk of all treatment demand is linked to cannabis. Countries experiencing an increase in heroin usage include those surrounding Afghanistan (Pakistan, Iran and Central Asia), as well as Russia, India and parts of Africa. Many of these areas have high levels of poverty and HIV, leaving them vulnerable to the worst effects of this drug.

Cocaine consumption has increased significantly in Europe, doubling or tripling in several countries over the last decade. In Africa, notably in the countries of western Africa, cocaine use has also increased. Overall cocaine consumption levels in Europe are still significantly lower than in North America. High and rising levels of cocaine use have also been reported from the UK, Spain and Italy. Cannabis is the largest illicit drug market by far, with roughly 160 million annual consumers. Although consumer demands for cannabis appear to have contracted somewhat, there has been a reported increase of cannabis use in Africa and in most countries of South America. The situation in Europe and Asia is mixed. Global demand for amphetamines (methamphetamine and amphetamine), which increased strongly in most parts of the world in the 1990s, is now showing signs of overall stabilisation.

The World Health Organization (WHO 2007) estimates that there are about two billion people worldwide who consume alcoholic beverages and 76.3 million with diagnosable alcohol use disorders. Alcohol is estimated to cause about 20–30 per cent of oesophageal cancer, liver cancer, cirrhosis of the liver, homicide, epileptic seizures, and motor vehicle accidents worldwide (WHO 2002). There are over one billion smokers across the world causing four million deaths a year (WHO 1998). There is an upward trend in tobacco smoking in Third World countries and in Eastern Europe.
WHAT IS A DRUG?

ACTIVITY 1.1

State by ticking yes or no what you think is/are the definition(s) of a drug

<table>
<thead>
<tr>
<th>Definition</th>
<th>Yes</th>
<th>No</th>
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<tr>
<td>A substance other than food intended to affect the structure or function of the body</td>
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<tr>
<td>A substance intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease</td>
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<tr>
<td>A substance used as a medication or in the preparation of medication</td>
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<td>A substance recognised in an official pharmacopoeia or formulary</td>
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<td>A substance intended for use as a component of a medicine but not a device or a component, part or accessory of a device</td>
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<td>A substance used in dyeing or chemical operations</td>
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<tr>
<td>A commodity that is not salable or for which there is no demand</td>
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<tr>
<td>Something, often an illegal substance that causes addiction, habituation, or a marked change in consciousness</td>
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<tr>
<td>Any substance or chemical that that alters the structure or functioning of a living being</td>
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<tr>
<td>A psychoactive substance that affect the central nervous system and alters mood, perception and behaviour</td>
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In fact, the definitions in Activity 1.1 are all potential definitions of a drug. However, the language of ‘addiction’ is confusing but it is essential to have a common language for understanding the complexities of substance misuse. There are various elements in what constitute a drug (food or chocolate can be considered a drug) as the concept is heavily influenced by the socio-cultural context and purpose of its use. The therapeutic use of drugs refers to a pharmacological preparation used in the prevention, diagnosis and treatment of an abnormal or pathological condition whereas the non-therapeutic use of drugs commonly indicates the use of illegal or socially disapproved substances (Rassool 1998). However, drugs can be either therapeutic or non-therapeutic or both. According to the World Health Organization (1981), a drug is ‘any substance or chemical that alters the structure or functioning of a living being’. Despite the broadness of the concept which limits its use for clinical and for certain practical purposes, it provides some perspective into its pervasive nature. A drug, in the broadest sense, is a
chemical substance that has an effect on bodily systems and behaviour. This includes a wide range of prescribed drugs and illegal and socially accepted substances.

ACTIVITY 1.2

- What are drug misuse and abuse?
- What is meant by the terms problem drug user and problem drinker?
- Explain the following terms: substance abuse, dependence and addictive behaviour
- What is meant by tolerance?
- What is meant by physical and psychological dependence?
- Users of psychoactive substances are described as experimental, recreational or dependent. What do the terms experimental, recreational and experimental mean? What are their characteristics?

DRUG MISUSE AND ABUSE

The terms ‘drug misuse’ and ‘drug abuse’ are difficult to define precisely but the operational use of these concepts is heavily dependent on the particular culture, ideology, aetiology and clinical practice (Rassool 1998) and the effect of the substance on the individual. Drug use refers to the ingestion of a substance that is used for therapeutic purpose or as prescribed by medical practitioners. The term drug misuse may be seen as the use of a drug in a socially unacceptable way that is harmful or hazardous to the individual or others (Royal College of Psychiatrists and Royal College of Physicians 2000). Drug misuse is the result of a psychoactive substance being consumed in a way that it was not intended for and causes physical, social and psychological harm. Drug misuse also implies use outside the therapeutic use which harms health or functioning. It may take the form of physical or psychological dependence or be part of a wider spectrum of problematic or harmful behaviour. It is also used to represent the pattern of use: experimental, recreational and dependent. The generic term ‘substance misuse’ is often used to denote the misuse of alcohol and drugs.

The term ‘drug abuse’, often associated with addiction and dependence, is considered to be value-laden and has limited use in the addiction literature in the United Kingdom. In the United States, practitioners prefer the term ‘abuse’ for problems resulting from the use of alcohol or other mood-altering drugs and use the term ‘addictive disorders’ when the problems have escalated to dependency (Sullivan 1995). The World Health Organization recommends the use of the following terms:

- **Unsanctioned use:** A drug that is not approved by society
- **Hazardous use:** A drug leading to harm or dysfunction
- **Dysfunctional use:** A drug leading to impaired psychological or social functioning
- **Harmful use:** A drug that is known to have caused tissue damage or psychiatric disorders.
DRUG DEPENDENCE

The term ‘drug dependence’ refers to behavioural responses that always include a compulsion to take the drug in order to experience its physical or psychological effects, and sometimes to avoid the discomfort of its absence. Dependence is often described as either physical or psychological. Physical dependence is a common and often important, but not a necessary, element of drug dependence. This highlights the core features of dependence such as tolerance and psychological and physical dependence. These concepts need further explanations and are examined in the next section. Dependence, according to DSM-IV (APA 1994), requires three out of seven criteria to be occurring at any time in the same 12-month period. The DSM-IV criteria for dependence are briefly presented in Table 1.1. Dependence is also seen as comparable to addiction as ‘the user has adapted physically and/or psychologically to the presence of the drug and would suffer if it is withdrawn’ (Royal College of Psychiatrists and Royal college of Physicians 2000).

ADDICTION AND ADDICTIVE BEHAVIOUR

The concept of addiction is synonymous with related terms such as dependence and misuse. Addictive behaviour includes the misuse of psychoactive substances and activities leading to excessive behavioural patterns. Individuals who have problems with excessive behaviours such as eating, drinking, drug use, gambling and sexuality present similar descriptions of the phenomenology of their disorders (Cummings, Gordon and Marlatt 1980, Orford 1985). This entails the classification of both

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Table 1.1 DSM IV Diagnostic Criteria for Substance Dependence

A maladaptive pattern of substance use leading to clinically significant impairment or distress is manifested by three or more of the following occurring during the same 12-month period:

1. Tolerance, as defined by either of the following:
   - need for markedly increased amounts of the substance to achieve intoxication or desired effect
   - markedly diminished effect of continued use of the same amount of the substance

2. Withdrawal, as manifested by either of the following:
   - the characteristic withdrawal syndrome for the substance
   - the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms

3. The substance is often taken in larger amounts or over a long period than was intended

4. A persistent desire or unsuccessful efforts to cut down or control substance use

5. A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), in use of substance (e.g., chain-smoking), or recovering from its effects

6. Important social, occupational or recreational activities are given up or reduced because of substance use

7. The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., current cocaine-induced depression, or continued drinking despite recognition that an ulcer was made worse by alcohol consumption)
pharmacological and non-pharmacological addictions under the more inclusive diagnostic category of addictive behaviour (Marks 1990, Ghodse 1995).

PROBLEM DRUG USERS AND PROBLEM DRINKERS

The terms ‘problem drug user’ and ‘problem drinker’ have been used to refer to those who are dependent on psychoactive substances. The problem drug user has been described as ‘any person who experiences social, psychological, physical or legal problems related to intoxication and/or regular excessive consumption and/or dependence as a consequence of his own use of drugs or other chemical substances . . . and may involve or lead to sharing of injecting equipment’ (ACMD 1982, 1988). This definition focuses on the needs and problems of the individual and places less emphasis on the substance-oriented approach. It is a holistic definition in acknowledging that the problem drug user has social, psychological, physical and legal needs, and the definition could be expanded to incorporate the spiritual needs of the individual of the problem drug user or problem drinker (Rassool 2001, Hammond and Rassool 2006).

HAZARDOUS DRINKERS

The World Health Organization (WHO 1994) defines hazardous use of a psychoactive substance, such as alcohol, as ‘a pattern of substance use that increases the risk of harmful consequences for the user . . . hazardous use refers to patterns of use that are of public health significance despite the absence of any current disorder in the individual user’. Hazardous drinkers are drinking at levels over the sensible drinking limits, in terms of either regular excessive consumption or less frequent sessions of heavy drinking.

HARMFUL DRINKERS

The WHO International Classification of Diseases (ICD-10) (1992) defines harmful use of a psychoactive substance, such as alcohol, as ‘a pattern of use which is already causing damage to health. The damage may be physical or mental.’ This definition does not include those with alcohol dependence. Harmful drinkers are usually drinking at levels above those recommended for sensible drinking, typically at higher levels than most hazardous drinkers. Unlike hazardous drinkers, harmful drinkers show clear evidence of some alcohol-related harm.

MODERATELY DEPENDENT DRINKERS

Moderately dependent drinkers may recognise that they have a problem with drinking and they may not have reached the stage of ‘relief drinking’ – which is drinking to relieve
or avoid physical discomfort from withdrawal symptoms (NTA 2006). In older terminology, drinkers in this category would probably not have been described as ‘chronic alcoholics’. Treatment of moderately dependent drinkers can often be managed effectively in community settings, including medically assisted alcohol withdrawal in the community.

SEVERELY DEPENDENT DRINKERS

Individuals in this category may have serious and long-standing problems of ‘chronic alcoholism’, and may have been heavy users over prolonged periods. This habit of significant alcohol consumption may be due to stopping the withdrawal symptoms. Such individuals may have special needs, such as co-existing psychiatric problems, learning disabilities, polydrug use or complicated assisted alcohol withdrawal; others may need rehabilitation and strategies to address the level of their dependence, or to address other issues, such as homelessness or social dislocation. However, more severely dependent drinkers may be in need of inpatient assisted alcohol withdrawal and residential rehabilitation.

PSYCHOLOGICAL AND PHYSICAL DEPENDENCE

Tolerance

Tolerance refers to the way the body usually adapts to the repeated presence of a drug. Higher quantities or doses of the psychoactive substance are required to reproduce the desired or similar cognitive, affective or behavioural effects. Individuals can develop tolerance to a variety of psychoactive substances. Tolerance may develop rapidly in the case of LSD or slowly in the case of alcohol or opiates. The drug must be taken on a regular basis and in adequate quantities for tolerance to occur. For example, amphetamines can produce considerable tolerance and strong psychological dependence with little or no physical dependence, and cocaine can produce psychological dependence without tolerance or physical dependence. Furthermore, in certain medical applications, morphine has been reported to produce tolerance and physical dependence without a significant psychological component.

Psychological dependence

Psychological dependence can be described as a compulsion or a craving to continue to take the substance because of the need for stimulation, or because it relieves anxiety or depression. Psychological dependence is recognised as the most widespread and the most important. This kind of dependence is attributed not only to the use of psychoactive drugs but also to food, sex, gambling, relationships or physical activities.
Physical dependence

Physical dependence is characterised by the need to take a psychoactive substance to avoid physical disturbances or withdrawal symptoms following cessation of use. The withdrawal symptoms depend on the type or category of drugs. For example, for nicotine, the physiological withdrawal symptoms may be relatively slight. For other dependence-inducing psychoactive substances such as opiates and depressants, the withdrawal experience can range from mild to severe. The withdrawal from alcohol for instance can cause hallucinations or epileptic fits and may be life-threatening. Physical withdrawal syndromes are not, however, the essence of dependence. It is possible to have dependence without withdrawal and withdrawal without dependence (Royal College of Psychiatrists 1987). Many of the supposed signs of physical dependence are sometimes psychosomatic reactions triggered off not by the chemical properties of psychoactive drug but by the user's fears, beliefs and fantasies about what withdrawal entails (Plant 1987).

THE DEPENDENCE SYNDROME

The original framework of the dependence syndrome referred specifically to alcohol dependence but this has been expanded to include other psychoactive substances. The dependence syndrome, derived from the disease, biological and behavioural models, has provided a common language for academics and clinicians to talk about the same phenomena. According to Edwards and Gross (1976), there are seven components of the syndrome (See Table 1.2)

Table 1.2 The dependence syndrome

- Increased tolerance to the drug
- Repeated withdrawal symptoms
- Compulsion to use the drug (psychological state known as craving)
- Salience of drug-seeking behaviour (obtaining and using the drug become more important in the person’s life)
- Relief or avoidance of withdrawal symptoms (the regular use of the drug to relieve withdrawal symptoms)
- Narrowing of the repertoire of drug taking (pattern of drinking may become an everyday activity)
- Rapid reinstatement after abstinence

KEY POINTS

- Drug use includes a wide range of prescribed drugs and illegal and socially accepted substances.
- The terms ‘problem drug user’ and ‘problem drinker’ have been used to refer to those who are dependent on psychoactive substances.
- Individuals can develop tolerance to a variety of psychoactive substances.
- Dependence have two components: physical and psychological dependence.
Drug can produce considerable tolerance and strong psychological dependence with little or no physical dependence.

The withdrawal symptoms depend on the type or category of drugs.

REFERENCES