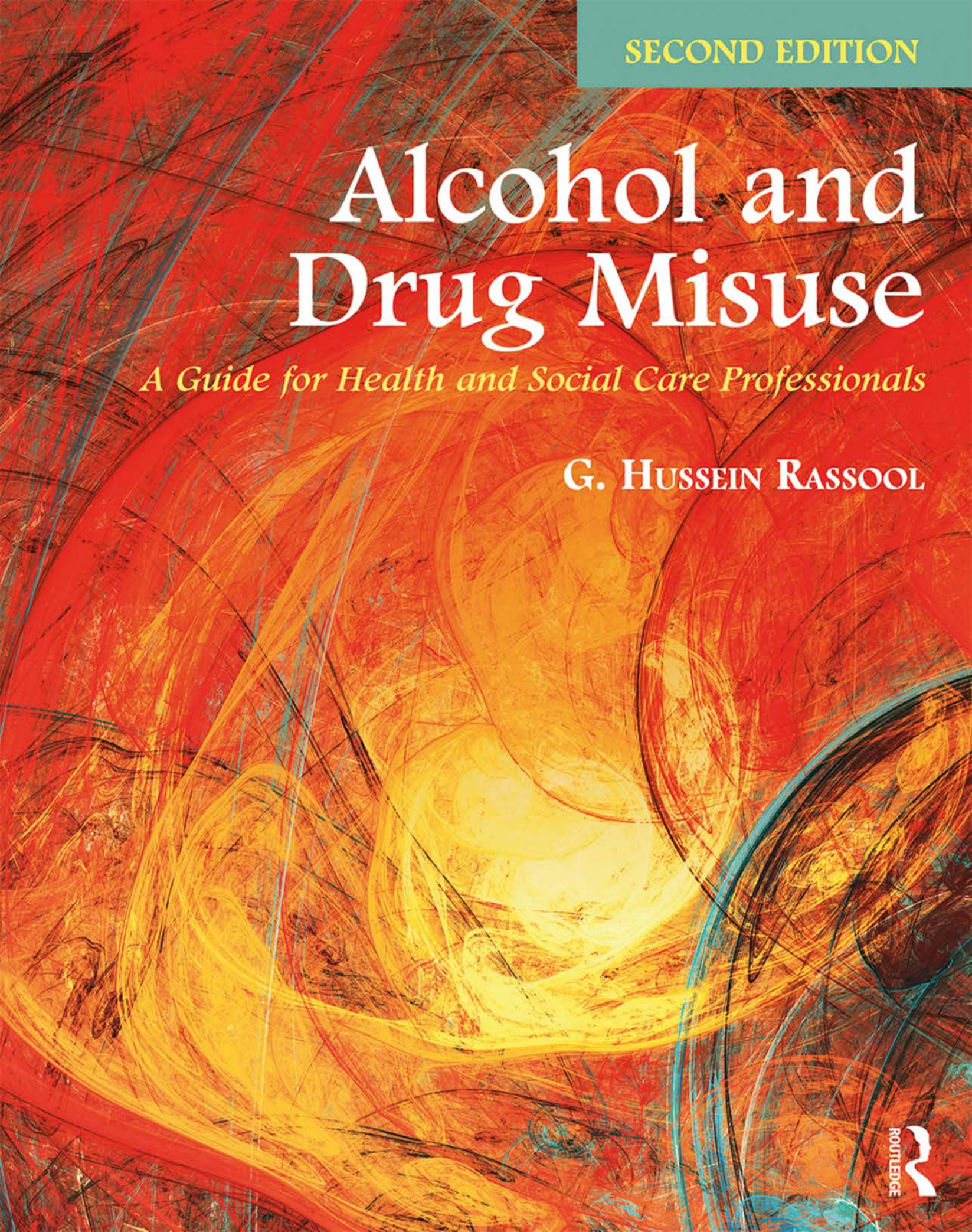
SECOND EDITION
Alcohol and Drug Misuse
A Guide for Health and Social Care Professionals
G. Hussein Rassool
ROUTLEDGE

Alcohol and Drug Misuse

Written by an experienced academic author, lecturer and practitioner, this comprehensive textbook provides an introduction to alcohol and drug misuse. It presents:

- the context of alcohol and drug misuse, and the nature and theories of addiction, including a historical overview and policy initiatives in contemporary society
- an overview of the problems associated with psychoactive substances and their impact on groups such as culturally and linguistically diverse communities, young people, women, older people and the homeless
- an understanding of the generic role responses to substance misuse in a variety of different settings and contexts, including primary care, the community and hospitals
- a framework for assessment, care planning, harm reduction approaches, dealing with overdose, intoxication and withdrawals, and psychological and pharmacological interventions
- an accessible and skills-oriented approach to assist students and practitioners in dealing with alcohol and drug misuse.

This new edition is fully updated and includes new material on: evidence-based pharmacological interventions; recent global strategies in alcohol and drug control; dual diagnosis and women; shisha smoking and up-to-date statistics on the prevalence of alcohol and drug misuse.

Alcohol and Drug Misuse takes into account current policy and practice for substance use and misuse and includes a range of pedagogical features to enhance learning. It is essential reading for nursing, health and social work students taking substance misuse modules, as well as related CPD courses for health and social care professionals.

G. Hussein Rassool is Professor of Psychology and Islamic Psychology, Dean of the Faculty of Liberal Arts and Sciences and Head of the Department of Psychology, Islamic Online University. He is also an independent consultant in addiction and mental health, and Clinical Consultant and Executive Director of the Islamic Online University Counselling Service.

Alcohol and Drug Misuse

A Guide for Health and Social Care Professionals

Second edition

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Dedicated to Yasmin Soraya, bint Ibn Hussein Ibn Hassim Ibn Sahaduth Ibn Rosool Ibn Olee,
Adam Ali Hussein, Reshad Hassan, Isra Oya, Assiyah Maryam, Idrees Khattab, Safian & Hassim.

Knowledge

Knowledge is of two kinds: that which is absorbed and that which is heard. And that which is heard does not profit if it is not absorbed.

Ali Ibn Abi Talib (RadiAllah Anhu)

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Preface to the second edition

It has been more than seven years since the first edition of this book presented readers with a solid foundation and perspective on alcohol and drug misuse. The popular reception of the book and the rapid changes in the global nature and use of psychoactive substances, the emergence of new types of drugs, the global debates about whether or not to legalise different illicit psychoactive drugs, the approach in reducing harm associated with excessive alcohol use and tobacco use disorder, border control and new evidenced-based health care interventions call for a new edition to assist student and health care professionals in the care and management of alcohol and drug misuse. With the aid of all this information I have completely revised the book. In preparing this new edition, I have incorporated other changes suggested by reviewers, students and teachers' comments, and the comments from colleagues. In this second edition, I have made the following changes and additions:

- Provision of technical corrections, updates, clarifications in all chapters of the original book.
- Updated the literature in all chapters substantially and reordered and added to the material in most chapters.
- New developments in the field and evidence-based practice.
- The references and the reflective activities have been updated.

The most obvious changes in this second edition are the new chapters:

- Chapter 6: Global policy initiatives and strategy on alcohol and drugs. The chapter in the first edition focuses on policy initiatives from a UK perspective. The new chapter examines policy initiatives and strategy in alcohol and drug use from a global perspective. It focuses on an examination of the debate on drug decriminalisation, depenalisation and legalisation issues, medical cannabis and global strategy for drugs, tobacco and alcohol.
- Chapter 17: Alcohol and drug misuse in culturally and linguistically diverse communities. In the first edition, this chapter focused on Black and ethnic minority communities in the UK. This chapter has completely been re-written and it examines alcohol and drug misuse in culturally and linguistically different communities. There is a section on culture and substance misuse; assessing health needs; and how to encourage culturally and linguistically diverse communities from utilisation of alcohol and drug services. New reflective activities have been added.

Among the new material in existing chapters: Chapter 3 has a new section on synthetic drugs. Chapter 4 contains a new section on bio-psychosocial-spiritual theory. Chapter 5 contains a new section on the alcohol experience. Chapter 7 contains a new section on profiles of alcohol users, binge drinking, alcohol and drug interactions. Chapter 8 contains a new section on the pharmacology of opioids and drug consumption rooms. Chapter 9 contains added materials on cannabis as a gateway drug. Chapter 10 contains new contents on the effects of mixing cocaine with other

psychoactive substances, and synthetic cathinones. In Chapter 13, the UK tobacco strategy was replaced by global tobacco strategy and a critical review of the policy. The chapter also contains a new section on electronic cigarettes or e-cigarettes, the legal status of e-cigarettes, Shisha smoking. In Chapter 14, a new section on global strategy for sexual health and HIV replaced the section on national strategy for sexual health and HIV. Chapter 19 has a new section on comorbidity issues for young people. Chapter 20 was restructured and new materials added. The title of Chapter 21 was changed to 'Public health approaches to substance misuse'. Chapter 27 contains a new section on 'Drug consumption rooms'. Chapter 28 contains a new section on 'Take home naloxone'. Chapter 31 contains new sections on 'Stop smoking in pregnancy and following childbirth' and 'Harm reduction approach' for tobacco use disorder.

I should add some acknowledgments to those I made in the preface to the first edition. I have changed institutions, so I should add my thanks to my colleagues at the Islamic Online University. I am especially grateful for the ongoing encouragement and support of Catherine Gray, Senior Editor, Social Care, Nursing and Allied Health and administrative staff at Routledge. I would also like to thank the reviewers for providing substantial and constructive criticisms in developing this new edition. Finally, I owe my gratitude to my children and grandchildren Yasmin Soraya, Adam Ali Hussein, Reshad Hassan, Isra Oya, Assiyah Maryam and Idrees Khattab, who keep me going and active in various endeavours and have taught me about learning and living.

Hussein Rassool
01 July 2017

Preface

Alcohol and drug misuse, their associated sequelae and interventions strategies are the premises of the book. The increase in the number of individuals with alcohol and drug problems has attracted considerable interest as one of the most important public health challenges. The book focuses on the approaches and intervention strategies that health and social care professionals can use to respond to this new challenge in specialist and non-specialist settings. The book underpins a number of current policy initiatives as applied to current practice and covers practically most aspects relating to alcohol and drug misuse. An added dimension is the coverage of special issues and needs of special populations, prevention and harm reduction, assessment, care planning, dealing with emergencies, psychological and pharmacological interventions.

The book provides a basic clinical and practical text on areas of clinical issues and practice, interventions, management, education. It will enable health and social care professionals and students to understand the extent and nature of substance use and misuse, and foster the knowledge and skills required in its management to provide effective care to those patients they encounter in their daily practice. In addition, it provides a framework to assist practitioners in dealing with complex issues related to alcohol and drug misuse. It is envisaged that the book will act as an excellent resource for health and social care practitioners who are unfamiliar with the substance misuse field. It will be of relevance to students in medicine, nursing, psychology, social work and the criminal justice system and those attending undergraduate and postgraduate courses in addiction and mental health studies. The book is practice-oriented and has several activities related to the content of the chapters.

Structure of the book

The book is presented in five parts. Part 1 provides an understanding of alcohol and drug misuse, the nature and theories of addiction with an historical overview. Policy initiatives and strategy in alcohol and drug that have shaped the provision and delivery of care are included. Part 2 presents the nature and problems associated with psychoactive substances from alcohol to eco-drugs. Part 3 deals with blood-borne viruses and special populations: culturally and linguistically diverse communities, young people, women, elderly and the homelessness. Part 3 also covers aspects of a synthesis of role, shared care, dual diagnosis in acute in-patient and forensic settings and models of care. Part 4 deals with the generic roles and responses to substance misuse in a variety of different settings and contexts. These include engaging substance misusers in primary care, community and hospital settings. Subsequent chapters cover prevention and health education, strategies in helping people to change and working with diversity. Part 5 focuses on frameworks for assessment, care planning, harm reduction approach, dealing with overdose, intoxication and withdrawals, psychological and pharmacological interventions.

The book contains a number of activities (True-False items, multiple-choice questions and questions requiring short answer) in each chapter. The reader is encouraged to undertake the activities found in each chapter to gain the added value of the contents.

Acknowledgements

I would like to thank Eloise and Grace at Taylor & Francis for their support and patience throughout the process of writing and publication of this book.

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To my patients and students for teaching me about the practice in the addiction field. Thanks also go to all my brothers at Al-Furqan, Les Guibies for their friendship and support. I would like to acknowledge the contributions of my teachers who enabled me, through my own reflective practices, to follow the path.

My special thanks also to Mariam for all the help and support during the writing of the book. Finally, I owe my gratitude to my children, Yasmin, Adam and Reshad who keep me going and active in various endeavours and taught me about life.

Part 1

Alcohol and drugs and global policy initiatives

Chapter 1

Introduction to substance use and misuse

Learning outcomes

- Have an understanding of the global drug scene.
- Explain the meaning of the following terms: drugs, alcohol, substance misuse, substance use disorder, addiction, problem-drug use and problem-alcohol use, hazardous drinker, harmful drinker, severely dependent drinkers, drinkers with complex problems and binge drinking.
- Examine the components of the concept of dependence: tolerance, physical and psychological dependence.
- Differentiate between commonly abused legal and illicit substances/drugs.

INTRODUCTION

The nature and extent of the global drug and alcohol problem are interwoven with all aspects of sustainable development. It is stated that all aspects of sustainable development including social development, economic development, environmental sustainability, peaceful, just and inclusive societies and partnership shape the nature and dynamic of the drug problem (UNDOC 2016). In the 21st century, there is no dovetailing of interest in the use of psychoactive substances and plants on a global scale.

The natural and synthetic psychoactive substances whether acting as a stimulant, depressant, hallucinogenic or mind-expanding affect an individual's thinking (cognitive), emotion (affective) and behaviours. The use of alcohol and drugs remain the social and psychological fabric of developed countries but now the emerging trend is that it is spreading in developing countries. For centuries, society has learned to co-exist with drugs and alcohol and its views of which drugs should be legal or illicit changes with time, economic and political considerations. Psychoactive substances have been used in ritual ceremonies, medicinally and recreationally. For example, tea, coffee and tobacco have all been illegal in this country at various points in history (Whitaker 1987), but with time, increasing availability and more widespread use opinions change, and the drug becomes "normalised". Alcohol and drugs cause a host of physical, social, psychological and economic harm 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; physical and mental health problems and morbidities. Alcohol and drugs are so ingrained in the human psyche that it makes it improbable that these compounds will disappear from our society. Despite policy legislations in terms of supply and demand of drugs, increased taxation, penalties for possession and sale, extensive preventive health education and anti-drug "education" campaigns, alcohol and drugs remain a public health problem. 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). However, the concern, from a public health perspective, is the rapid proliferation of new Novel Psychoactive Substances (NPS) with potential harms. In relation to

gender and drug misuse, "men are three times more likely than women to use cannabis, cocaine or amphetamines, whereas women are more likely than men to engage in the non-medical use of opioids and tranquilizers" (UNDOC 2016 p. 13).

GLOBAL DRUG SCENE

The main problem of drugs at the global level continues to be cannabis, while amphetamines remain the second most commonly used drug. However, the use of opiates and prescription opioids is less common, but opioids, mainly heroin, remain one of the major drugs of public health concern with potential harm and health consequences (UNDOC 2016). It is reported that cocaine consumption increased significantly mainly because of an increase in cocaine use in South America and there appears to be some stability in the use of amphetamines (UNDOC 2016). It is estimated that "excluding alcohol, tobacco and caffeine products the top 10 drugs used across the world were: cannabis, MDMA, cocaine, amphetamines, LSD, magic mushrooms, prescribed and non-prescribed opioid medication, nitrous oxide, ketamine and poppers" (Global Drug Survey 2016). The Novel Psychoactive Substances (NPS), marketed as Spice, bath salts and herbal incense continue to be characterised by the large number of new substances being reported. By modifying the chemical compounds of the drugs, the new synthetic drugs on the market are circumventing existing laws. Most of the psychoactive substances in this category include cannabinoids, cathinones, opioids, phenethylamines, tryptamines, benzodiazepines and arylalkylamines (EMCDDA 2015; UNDOC 2016). However, there is limited information of the dangers and toxicity of most of the novel synthetic psychoactive drugs.

The harms caused by the high potency of cannabis and the increasing use of amphetamines have led to an increase in treatment demands for both substances. It is reported that more younger people are seeking treatment for cannabis and amphetamines use disorders more than any other drugs (UNDOC 2016), and that synthetic cannabinoids are more likely to lead to emergency medical treatment than any other drug (Global Drug Survey 2016). However, due to its potency it is estimated that users of NPS are three times more likely to end up seeking emergency medical treatment compared to the use of traditional drugs (Global Drug Survey 2016). The health consequences of the use of drugs and alcohol include physical and mental health problems (dual diagnosis) (Vanderplasschen *et al*. 2012). Mental health problems and substance use disorders sometimes occur together for a variety of reasons. Certain psychoactive substances can cause problem substance users to experience the symptoms of mental health problems. In addition, mental health problems including stress, traumatic disorder, personality disorder and depression can sometimes lead to alcohol or drug use. Some of the users who inject drugs are living with HIV or blood-borne infections. Drug-related deaths worldwide are mostly attributed to opioids overdose.

Alcohol remains our favourite social lubricant and is associated with adverse physical, mental and behavioural health conditions and social consequences related to its intoxication, toxicity and dependence. Alcohol and drug misuse, with tobacco, is by far the most prevalent addictive behaviour and causes the large majority of the harm (Gowing *et al*. 2015). The World Health Organization (WHO 2014) estimates that, globally, about 3.3 million deaths every year (or 5.9% of all deaths), and 5.1% of the global burden of disease, is attributable to alcohol consumption. More than 200 health conditions have been associated with alcohol consumption including major non-communicable diseases such as liver cirrhosis, some cancers and cardiovascular diseases and infectious diseases such as tuberculosis, HIV/AIDS and pneumonia (WHO 2014). In addition, there are trauma and injuries due to road traffic accidents, violence, suicides and fatal alcohol-related injuries.

In relation to the use of tobacco smoking globally, 12% of all deaths among adults (about 5 million adults) aged 30 years and over were attributed to tobacco; that is one death approximately every six seconds (WHO 2012). It is estimated that tobacco use is responsible for an estimated 7% of all deaths due to tuberculosis, 12% of deaths due to lower respiratory infections, 10% of all deaths from cardiovascular diseases, 22% of all cancer deaths, and 36% of all deaths from diseases of the respiratory system (WHO 2012). There is an upward trend in tobacco smoking in Third World countries and in Eastern Europe. With the rise in the trend in the use of waterpipe tobacco smoking

(hookah), "e-hookahs", "e-shisha" or "hookah pens" in Western countries, there are new dangers and harms. Hookah smoking that delivers the addictive drug nicotine carries many of the same health risks as cigarettes. However, hookah smoking has been associated with lung cancer, respiratory illness, low birth weight and periodontal disease (American Lung Association 2007, Akl *et al*. 2010, CDC 2015a).

Many substance users who used drugs recreationally or on a regular basis tend to be polydrug users meaning that they use a combination of drugs. There are wide variations in the patterns of drug use of polydrug users and this ranges from recreational alcohol and cannabis use to the daily use of a combination of heroin, cocaine, alcohol and benzodiazepines (EMCDDA 2009). The rationale for using a combination of drugs is to enhance, potentiate or counteract the effects of another drug (WHO 1994). The combinations in the use of different drugs, concurrently or sequentially, can be harmful and dangerous. For examples, some of the most dangerous combinations include alcohol and cocaine (Cocaethylene); alcohol and ecstasy; alcohol and methamphetamine or amphetamine; alcohol and benzodiazepines; opiates and cocaine; cocaine and ecstasy; opioids and benzodiazepines; opioids and benzodiazepines and alcohol; and alcohol and any other drug. Polydrug users are usually admitted for emergency medical treatment due to overdose and there is a high morbidity rate among this sub-population of drug users.

The *nonmedical use* of prescription drugs, that is misuse of prescription drugs, is a global health concern. The *nonmedical use* of prescription drugs means "taking a medication in a manner or dose other than prescribed; taking someone else's prescription, even if for a legitimate medical complaint such as pain; or taking a medication to feel euphoria (for example, to get high)" (NIDA 2016). The most common types of psychoactive prescription medication include:

> (a) opioids, such as hydrocodone, oxycodone, propoxyphene, hydromorphone, meperidine, and fentanyl; (b) other central nervous system depressants, including both barbiturates, such as pentobarbital sodium, and benzodiazepines, such as diazepam and alprazolam; and (c) central nervous stimulants, including amphetamines such as dextroamphetamine, and amphetamine-like stimulants, such as methylphenidate.
>
> (UNDOC 2011, p. 2)

Groups of individuals who seem to be at greater risk of non-medical use of prescription drugs includes patients, young people, women, older adults and health care professionals (UNDOC 2011). The over-prescribing of psychoactive substances, mainly opioids, for pain or illness management has led to addictive behaviours and an increase in mortality. It is reported that overprescribing of opioid pain relievers has been associated with a rise of opioid addiction and overdose deaths (Kolodny *et al*. 2015; Rudd *et al*. 2016).

Opioid medications like Vicodin (hydrocodone), OxyContin (oxycodone) and methadone are responsible for the increase in addiction, drug overdoses and mortality (CDC 2015b, 2017).

The use of over the counter (OTC) drugs as self-medication has an important role to play in health and lay care systems. OTC drugs are medicines available without a prescription at pharmacies or supermarkets. Some commonly abused OTC medications include codeine-based (especially compound analgesic) medicines, cough products (particularly dextromethorphan), sedative antihistamines, decongestants and laxatives (Cooper 2013). However, like prescribed and illicit psychoactive substances, these drugs may also lead to misuse and pose a risk for developing an addiction. There is evidence to suggest that OTC drugs are being misused, and by those addicted to drugs or/or alcohol (Lessenger and Feinberg 2008; Reay 2009; Hughes *et al*. 1999; Frei *et al*. 2010).

New HIV infections among adults have slowed alarmingly in recent years (UNAIDS 2016). Illicit drug users continue to be a group at high risk for the prevalence of HIV, hepatitis and tuberculosis. Drinking alcohol or taking other drugs can compromise judgment or decision-making, leading you to take risks. This may lead to risky sexual behaviour, including unsafe sex, trading sex for drugs and needle sharing. Injection drug use is a well-known route of transmission of blood borne infections, particularly HIV and hepatitis B and C. It is reported that those who inject illicit drugs are at high risk of contracting tuberculosis, whether or not they are infected with the human immunodeficiency virus (HIV) (Getahun *et al*. 2012). HIV infection in pregnancy has become the most common medical complication of pregnancy in some countries. It is reported that "more than 70% of all HIV infections

are a result of heterosexual transmission and over 90% of infections in children result from mother-to-child transmission" (WHO and UNAIDS 1998).

WHAT IS A DRUG?

In fact, these 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 addiction to alcohol and drugs. There are various elements of what constitute a drug (food or chocolate is considered a drug) as the concept is heavily influenced by the socio-cultural context and purpose of its use. The therapeutic use of drugs means a pharmacological preparation used in the prevention, diagnosis and treatment of an abnormal or pathological condition whereas the non-therapeutic use of drugs is commonly referred to the use of illegal or socially disapproved substances (Rassool 1998). However, a drug can be either therapeutic or non-therapeutic or both. According to the WHO (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, illegal, over the counter and socially accepted recreational substances.

Activity 1.1

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

Definitions	Yes	No
A substance other than food intended to affect the structure or function of the body[1]		
A substance intended for use in the diagnosis, cure, mitigation, treatment or prevention of disease[1]		
A substance used as a medication or in the preparation of medication[1]		
A substance recognised in an official pharmacopoeia or formulary[1]		
A substance intended for use as a component of a medicine but not a device or a component, part or accessory of a device[1]		
A substance used in dyeing or chemical operations[1]		
A commodity that is not salable or for which there is no demand[1]		
Something and often an illegal substance that causes addiction, habituation or a marked change in consciousness[1]		
Any substance or chemical that alters the structure or functioning of a living being[2]		
A psychoactive substance that affects the central nervous system and alters mood, perception and behaviour		

Source: [1] Encyclopædia Britannica (2007).
[2] World Health Organization (1981).

Activity 1.2

- What is drug misuse and abuse?
- What is meant by the term 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 dependent mean? What are their characteristics?

DRUG MISUSE AND ABUSE

The terms drug misuse and abuse are difficult concepts to define precisely but the operational use of these concepts is heavily dependent on particular culture, ideology, aetiology and clinical practice (Rassool 1998) and the effect of the substance on the individual. Drug use is referred to as 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 drugs 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 WHO 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 cause 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 necessary, element of drug dependence. This highlights the core features of dependence such as tolerance, psychological and physical dependence. These concepts need further explanations and are examined in the next section. Dependence, according to NIDA (2007) occurs when "the neurons adapt to the repeated *drug* exposure and only function normally in the presence of the *drug*. When the *drug* is withdrawn, several physiologic reactions occur. These can be mild (e.g., for caffeine) or even life threatening (e.g., for alcohol). This is known as the withdrawal syndrome". 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). It has been suggested that there was so much misunderstanding about the concept of dependence, linking dependence with addiction, as this state can be a normal body reaction

to a substance (APA 2013). The Diagnostic and Statistical Manual of Mental Disorders (APA 2013) was updated in 2013 and the categories of substance abuse and substance dependence were replaced with a single category: substance use disorder.

SUBSTANCE-RELATED AND ADDICTIVE DISORDERS

In the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) (APA 2013), substance use disorders span a wide variety of problems arising from substance use measured on a continuum from mild to severe. Each specific substance is addressed as a separate use disorder (e.g., alcohol use disorder, stimulant use disorder, etc.), but nearly all substances are diagnosed based on the same overarching criteria. Gambling disorder is the sole disorder in a new category on behavioral addictions. This new condition "reflect[s] research findings that gambling disorder is similar to substance-related disorders in clinical expression, brain origin, comorbidity, physiology, and treatment" (APA 2013). The most common disorders include:

- Alcohol Use Disorder
- Cannabis Use Disorder
- Hallucinogen Use Disorder
- Inhalant Use Disorder
- Opioid Use Disorder
- Sedative, Hypnotic or Anxiolytic Use Disorder
- Stimulant Use Disorder
- Tobacco Use Disorder
- Non-Substance-Related Disorders | Gambling Disorder

A diagnosis of substance use disorder is based on evidence of impaired control, social impairment, risky use and pharmacological conditions. In DSM-V, mild substance use disorder requires two to three symptoms, four or five symptoms indicate a moderate substance use disorder, and six or more symptoms indicate a severe substance use disorder. The DSM-V criteria for substance use disorder are briefly presented in Table 1.1.

Table 1.1
DSM-V diagnostic criteria for substance use disorder

- 11 diagnostic criteria (some classes of substances have 10 criteria).
- 2 or more within a 12-month period.
- Must include a pattern of use leading to clinically significant impairment or distress.

1. Substance often taken in larger amounts or over a longer period of time than intended (impaired control).
2. A persistent desire or unsuccessful efforts to cut down or control use (impaired control).
3. A great deal of time spent in activities necessary to obtain the substance, use it or recover from its effects (impaired control).
4. Craving, or strong desire or urge to use (impaired control) (New criteria).
5. Recurrent use resulting in failure to fulfill major role obligations at work, school or home (social impairment).
6. Continued use despite having persistent or recurrent social/interpersonal problems caused or exacerbated by use (social impairment).
7. Important social, occupational or recreational activities given up or reduced because of use (social impairment).
8. Recurrent use in situations which are physically hazardous (risky use).
9. Use is continued despite knowledge of having a persistent or recurrent physical/psychological problem likely to have been caused or exacerbated by use (risky use).
10. Tolerance: the need for markedly increased amounts of substance to achieve intoxication or desired effect, or a markedly diminished effect with continued use of same amount (pharmacological).
11. Withdrawal: a characteristic syndrome, or use to relieve or avoid withdrawal (pharmacological).

A maladaptive pattern of substance use leading to clinically significant impairment or distress, as 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 longer 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), use of substance (e.g., chain-smoking), or recover 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 than an ulcer was made worse by alcohol consumption).

ADDICTION AND ADDICTIVE BEHAVIOUR

Addiction is not considered a specific diagnosis in the fifth edition of DSM-V. 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 *et al.* 1980; Orford 1985). This entails the classification of both pharmacological and non-pharmacological addictions under the more inclusive diagnostic category of addictive behaviour (Marks 1990; Ghodse 1995).

PROBLEM DRUG USER AND PROBLEM DRINKER

The terms problem drug user and problem drinker have been used to refer to those who are dependent on psychoactive substances. 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). The above 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 problem drug user or problem drinker (Rassool 2001; Hammond and Rassool 2006).

HAZARDOUS DRINKERS

The WHO (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, either in terms of regular excessive consumption or less frequent sessions of heavy drinking. Hazardous drinkers are not a diagnostic label.

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". Moderately dependent drinkers' treatment 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, "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. The severely dependent drinkers may have special needs, such co-existing psychiatric problems, learning disabilities, polydrug use or complicated assisted alcohol withdrawal. More severely dependent drinkers may be in need of inpatient assisted alcohol withdrawal and residential rehabilitation. There is also a need to address other issues, such as homelessness or social dislocation.

BINGE DRINKING

Binge drinking usually refers to heavy use of alcohol in a short space of time. In the United Kingdom (UK), binge drinking is defined as "drinking lots of alcohol in a short space of time or drinking to get drunk" (Drinkware 2016). Binge drinking is also characterised by having over eight units of alcohol in a single session for men and over six units per women (ONS 2015). In the United States, SAMSA (2015) binge drinking is defined as drinking five or more alcoholic drinks on the same occasion on at least one day in the past 30 days. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) defines binge drinking as "a pattern of drinking that produces blood alcohol concentrations (BAC) of greater than 0.08 g/dL. This usually occurs after 4 drinks for women and 5 drinks for men over a 2 hour period".

PSYCHOLOGICAL AND PHYSICAL DEPENDENCE

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. When opiate drugs such as heroin are used recurrently over time, tolerance may develop. However, tolerance may develop rapidly in the case of LSD or slowly in the case of alcohol or opiate. 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.

The level of tolerance depends on a number of factors including body weight, types of illness, stress, weakened immune system and age. Tolerance can decrease rapidly as a result from a few days of abstinence, cessation of use due to imprisonment or whilst in drug treatment. If the same amount or dose of psychoactive substance is taken after the cessation of use, this may result in the danger of overdosing. There is evidence to suggest that tolerance is influenced when a person uses drugs in a new or unfamiliar setting and consequently at a higher risk for overdose (Siegel *et al*. 1982).

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.

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 despite being aware of its harmful effect. Psychological dependence is recognised as the most widespread and the most important. This kind of dependence is not only attributed 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. In 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 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 was 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).

KEY POINTS

- Drug use includes a wide range of synthetic, prescribed drugs, 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.
- Binge drinking usually refers to heavy use of alcohol in a short space of time.
- A diagnosis of substance use disorder is based on evidence of impaired control, social impairment, risky use, and pharmacological conditions.
- Individuals can develop tolerance to a variety of psychoactive substances.
- Dependence has two components: physical and psychological dependence.
- Drugs 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.

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Self-awareness and attitude

Learning outcomes

- Have developed greater sensitivity regarding substance misusers.
- Have more empathy with individuals with alcohol or drug problems.
- Describe the stigmatisation and stereotypes faced by alcohol and drug users.
- List some of the harmful psychoactive substances.
- Have an awareness of, and be more confident around drug/alcohol issues.

In this chapter, we will consider your own use of alcohol and drugs. In order to understand the nature and reasons behind the use of alcohol and drugs, you will need first to understand your own "dependence" on psychoactive substances and other things. You need also to be more aware of your own attitude towards substance misusers. Understanding why individuals become dependent on alcohol or drug may enable you to have a more positive attitude (feeling, thinking and behaviour) about substance misusers and enable them to change or modify their life-style and behaviour.

This activity is based on your own "dependency" on substances (alcohol and drugs), things, people or activities (Scottish Drugs Training Project, University of Sterling). For example, people may be dependent on coffee, tea, chocolate, or alcohol at the end of the working day, first cigarette on waking up, jogging, horse racing, Internet and soap operasa. In fact, any substances, things or activities that would cause a void in your daily life if they have been taken away from you. The reasons why people use drugs and continue to use drugs are two different propositions. The reasons may or may not be the

Activity 2.1

1. List your dependence/dependencies
   a. Substances:
   b. Activities:
   c. People/Things.

2a. What are the reasons you think you may be dependent?
2b. Why do you need them?
2c. What do they do for you?
3a. How would you feel if you had to give up your preferred choice of dependence?
3b. Would it be easy or difficult?
3c. Would you have physical or psychological withdrawal symptoms or both?

Source: Scottish Drugs Training Project, University of Sterling

same. Physical and psychological withdrawals of psychoactive substances are discussed in Part 2.

ATTITUDE

An attitude is the way we feel, think and behave towards an individual or things. For example, one can have a good (or positive) attitude toward their working with alcohol and drug misusers, usually meaning that they feel good about their work and their roles in working with this client group. Others may think or feel different about substance misusers. For example, most alcohol or drug misusers are unpleasant to work with or the penalties for drinking and driving are too lenient.

Attitudes are influenced by a variety of factors, including past experiences (positive and negative), knowledge, education, context of the situation, and cultural and religious factors. Changing attitudes is a complex problem as an individual's attitudes may be closely tied to their personal values, belief system or important aspects of their self-identity (Wood 1998). Many factors impact on nurses and other health care professionals' willingness to intervene with individuals who use drugs and alcohol. These factors include knowledge, training, organisational structure and policies and previous positive or negative experiences. Attitudes towards drug or alcohol users represent one factor within this wider set that may impact on health professionals' responses to individuals with problematic substance use.

Acceptance of new attitudes "depends on who is presenting the knowledge, how it is presented, how the person is perceived, the credibility of the communicator, and the conditions by which the knowledge was received" (Halloran 1967: 60–61). Attitude cannot solely be changed by simple education. It is important to recognise, however, that work colleagues, supervisors and the organisational culture may also influence workers' attitudes towards individuals who use alcohol and drugs (Pidd *et al*. 2004).

Attitudes towards individuals who use alcohol or drugs can be broadly categorised as professional or personal views. Professional attitudes refer to beliefs concerning professional practice such as role legitimacy (i.e., is it appropriate for me to respond to drug use within my professional role?), confidence (perceived level of skill and ability) and perceived efficacy of available treatments and interventions. Personal attitudes refer to feelings and beliefs that stem from the stigmatised nature of drug use, for example blame and anger.

ATTITUDE AND STIGMATISATION

Attitudes towards substance abusers remain a perennial problem. Despite the magnitude of the problem, and even when alcohol and drug problems are identified, health care professionals may be reluctant to respond appropriately due to negative attitudes towards substance misusers. Social prejudice, negative attitudes and stereotyped perceptions of substance misusers and those with co-morbid mental health and substance misuse problems are held widely amongst health care professionals and this may lead to minimal care being given to this population (Rassool 1998; Richmond and Foster 2003; Brener *et al*. 2010; van Boekel *et al*. 2013). Nurses in emergency departments have negative perception of drug users because they assumed that these individuals feigned their behaviours in order to obtain drugs (Hamdan-Mansour *et al*. 2011). There is some evidence that health professionals' attitudes towards substance abusers exert a significant influence on their willingness to assess and intervene, and the quality of the therapeutic relationship (Howard and Chung 2000). The stigmatising attitude toward substance misusers can also be a major barrier for the misusers to seek treatment. It has been suggested that stigmatised individuals are more likely to have negative attitudes toward treatment for their problems (Conner and Rosen 2008). Gafoor and Rassool (1998) stated that overtly self-abusive behaviour, particularly when it involves illicit drugs, can be dealt with in a suppressive and moralist way by many health care workers not least of all nurses, probably out of a sense of frustration or inadequacy about an ability to effect any change. Negative attitudes have been associated with the application of alcohol and drug training into clinical practice by nurses, reduced likelihood that clients will pursue referrals and reluctance to engage in management and treatment with substance abusers (Ask *et al*. 1998; Abouyanni *et al*. 2000; Mistral and Velleman 2001). There is also evidence to suggest that substance misusers are reluctant to utilise health services for drug-related or other health problems due to the negatives attitudes and behaviours of staff (McLaughlin *et al*. 2000).

Complete the Rassool Attitude Towards Substance Misusers Questionnaire (© Copyright G. Hussein Rassool 2004. Permissions should be obtained from the author for the use of the questionnaire). Reflect about your attitudes towards alcohol and drug misusers. Write in your reflective journal about your own substance use and your attitude towards substance misusers.

It is clear that unless nursing education addresses the attitudes that underpin the stigmatisation of substance abusing patients, and supports the acquisition of the necessary skills and knowledge, a significant proportion of patients will be denied due response and intervention (Rassool 2007).

Activity 2.2 Rassool attitude towards substance misusers questionnaire (RATSMQ-10)

The statements on the following pages reflect several different opinions, beliefs and viewpoints about substance use and misuse. Please indicate how strongly you agree or disagree with each statement. To complete the instrument please place a tick in the box that best reflects how strongly you agree or disagree with each statement.

1. Personal use of illicit drug should be legal in the confines of one's home.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree

2. Drug addicts suffer from feelings of inferiority.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree

3. People who use illicit drug do not respect authority.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree

4. Heroin is so addictive that no one can really recover once he or she becomes an addict.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree

5. Rehabilitation of drug misusers always fails.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree

6. Illicit drug users are a monetary and social drain on the community.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree

7. Compulsory treatment is necessary for those who are addicted to drug and/or alcohol.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree

8. Alcohol misusers should be referred to a specialist once health problems are identified.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree

9. Those who are addicted to drugs are unpleasant to work with.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree

10. Drug addicts are stigmatised by health care professionals.

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree

HARM

Public health policy regarding drug and alcohol misuse is primarily aimed at reducing the harm caused to individual users, their families and society. Some drugs are more harmful than others. Harm caused by substance misuse includes physical harm, social harm, psychological harm and economic harm. Currently, harmful substances are currently regulated according to classification systems (Legislation on Misuse of Medicine/Drugs Act) that purport to relate to the harms and risks of each drug.

This exercise examines an individual's notion of a "harmful" drug. You should classify and write each substance according to the relative degree of harm you think it causes.

A new "matrix of harm" for drugs of abuse has been proposed by Nutt *et al.* (2007). The study proposes that drugs should be classified by the amount of harm that they do, rather than the sharp A, B and C divisions for example, in the UK Misuse of Drugs Act. Nutt *et al.* (2007) identified three main factors that together determine the harm associated with any drug of potential abuse:

- The physical harm to the individual user caused by the drug
- The tendency of the drug to induce dependence
- The effect of drug use on families, communities, and society

The new ranking places alcohol and tobacco in the upper half of the league table. These socially accepted

Activity 2.3 List of substances

Amphetamines	Ecstasy
Anabolic Steroids	GHB
Alkyl Nitrates	Heroin
Alcohol	Examine
Barbiturates	Chat
Benzodiazepines	LSD
Buprenorphine	Methadone (street)
Cocaine	Solvents
Cannabis	Tobacco

You should classify and write each substance in the table above according to the relative degree of harm you think it causes. For example, if you think that Ecstasy is the most harmful substance in the list, you should write it in the space provided in the table below in the number 1 ranking.

1		10	
2		11	
3		12	
4		13	
5		14	
6		15	
7		16	
8		17	
9		18	

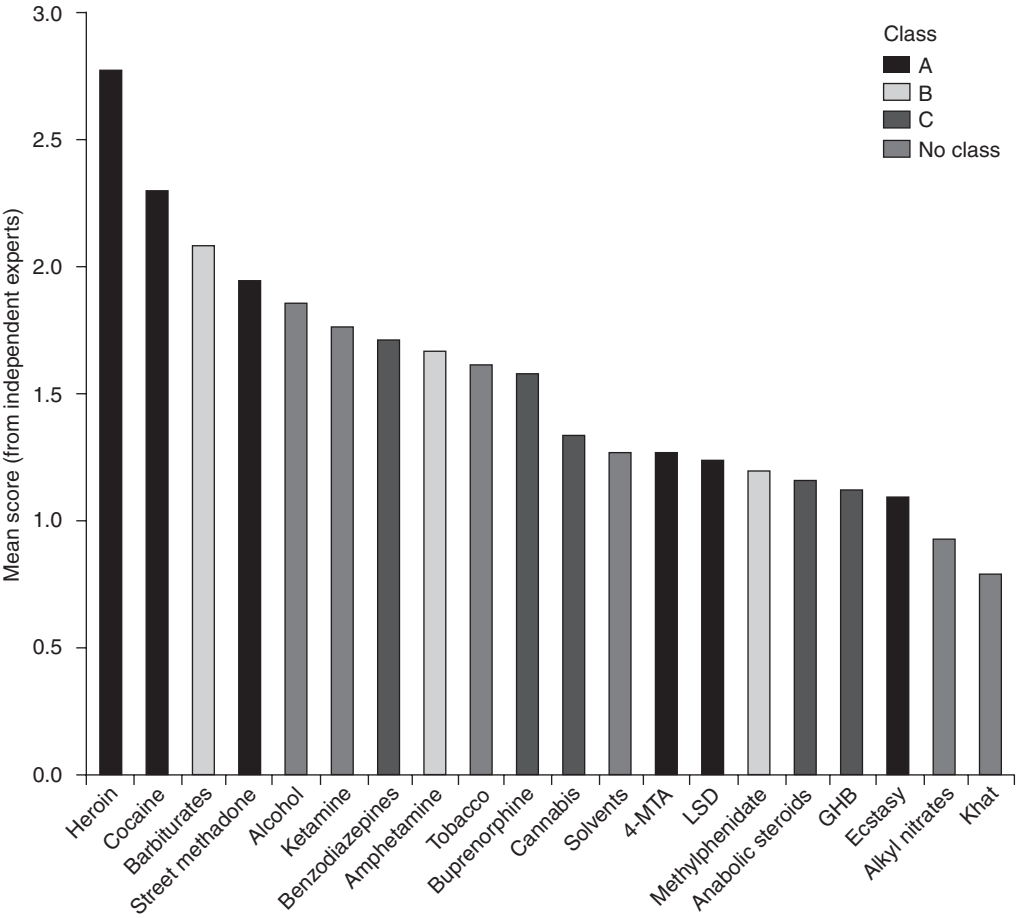

FIGURE 2.1 Mean harm score of twenty psychoactive substances
Source: Nutt *et al.* (2007)

drugs were judged more harmful than cannabis, and substantially more dangerous than the Class A drugs LSD, 4-methylthioamphetamine and ecstasy (See Figure 2.1 for new ranking). Heroin and cocaine were ranked most dangerous, followed by barbiturates and street methadone. Alcohol was the fifth-most harmful drug and tobacco the ninth most harmful. Cannabis came in 11th, and near the bottom of the list was Ecstasy. Now compare your own classification with those of Nutt *et al.* (2007) as shown in Figure 2.1.

- What are the similarities or differences in comparison?
- Are your ideas of harm of substances based on the media, your personal experience or experiences of others?
- Is the notion of harm based on medical, moral, social or legal criteria?

CONFIDENCE SKILLS

In order to work with alcohol and drug misusers, there is a need to have confidence in our own abilities. Confidence is a psychological quality that arises from considering if a person or thing is capable of something. Confidence can be a self-fulfilling prophecy, as those without it may fail or not try because they lack it, and those with it may succeed because they have it, rather than because of an innate ability (wikipedia.org/wiki/Confidence 2007). Nurses and other health care professionals will have some areas of their nursing or health activity where they feel quite confident, while at the same time they do not feel at all confident in other areas. Confidence is something which comes naturally with experience and practice but for some individuals could be an attitude or a habit of thought. By taking a positive attitude this may enable the development of confidence skills in working with alcohol and drug misusers.

Activity 2.4 Addiction intervention skills questionnaire (© Rassool 2004).

To complete the instrument please place a tick in the box that best reflects your confidence level

	Low confidence	Moderate confidence	High confidence
Providing alcohol use education and prevention information			
Recognising signs and symptoms of alcohol problems			
Talking to patients about risks of alcohol misuse			
Taking an alcohol history			
Refer patients for alcohol treatment			
Providing care for patients with alcohol problems			
Providing drug use education and prevention information			
Recognising signs and symptoms of drug problems			
Talking to patients about risks of drug misuse			
Taking a drug history			
Refer patients to drug treatment			
Providing care for patients with drug problems			
Giving health risk information on prescribed medication			
Informing smokers about health risks of tobacco smoking			
Providing tobacco education and prevention information			
Knowledge of drug and alcohol services			

Please complete the questionnaire of intervention confidence skills in working with substance misusers now. When you have completed the book or a course, you should return and complete the questionnaire for a second time. It would be valuable for you to compare the two sets of questionnaires in relation to your intervention confidence skills.

KEY POINTS

- There is a need to be self-aware about own dependence on substances, things, activities or people.
- Reflect on your own attitude towards those with alcohol and drug problems.
- It is important to develop a positive attitude in order to enhance the quality of care given to those with alcohol or drug problems.
- Public health policy regarding drug and alcohol misuse is primarily aimed at reducing the harm caused to individual users, their families and society.
- Harm caused by substance misuse includes physical harms, social harms, psychological harms and economic harms.
- Working with substance misusers requires confidence which derives with experience and practice.
- By taking a positive attitude this may enable the development of confidence skills in working with alcohol and drug misusers.

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Chapter 3

Historical overview

Learning outcomes

- To have an understanding of the historical dimension of alcohol and drug use.
- To compare the use of alcohol and drugs in today's society with those in the past.

INTRODUCTION

The use of psychoactive substance dates back thousands of years and records of ancient civilisations provide evidence of the use of alcohol and plants with psychoactive properties. From the earliest time, alcohol and drugs have been used for medicinal, religious, cultural and recreational purposes and as a social lubricant. The use of alcohol and drugs throughout history helps us to understand the distinctive nature of the use and misuse of psychoactive substances in today's society and the changes in the use and misuse of alcohol and drugs.

ALCOHOL

The word "alcohol" comes from the Arabic language, and may be derived from the *al-kuḥl*, the name of an early distilled substance, or perhaps from *al-ġawl*, meaning "spirit" or "demon" and akin to liquors being called "spirits" in English. The discovery of late Stone Age beer jugs has established the fact that intentionally fermented beverages existed at least as early as the Neolithic period (cir. 10,000 BC), and it has been suggested that beer may have preceded bread as a staple; wine clearly appeared as a finished product in Egyptian pictographs around 4000 BC (Hanson 1995).

One of the first mentions of wine in Scripture is by Melchizedek, priest of the Most High God at Salem (Jerusalem) during the time of Abraham (Grace Communion International 1989). Melchizedek "brought forth bread and wine" for Abraham and his companions (Genesis 14: 18). The earliest reference to the misuse of alcohol appears in the Old Testament referring to when Noah drank too much *yayin* (Wine in Hebrew) and became drunk (Genesis 9: 21); Lot (Genesis 19: 30–36) and Nabal (Samuel 25: 36). However, both the Old and New Testaments contain many commands against excessive use of alcohol and drunkenness. In ancient Egypt alcoholic beverages were considered a necessity of life and Osiris, the god of wine, was worshipped throughout the entire country. Alcohol was used for pleasure, nutrition, medicine, ritual, remuneration and funerary purposes. Drinking bouts and excessive drinking were common in ancient Egypt and Assyria for religious rituals and festive occasions.

The first alcoholic drink to obtain widespread popularity in what is now Greece was mead, a fermented beverage made from honey and water. Wine drinking was used in religious rituals, in social encounters and hospitality, for medicinal purposes and it became an integral part of daily meals. In ancient Greece, habitual drunkenness was uncommon because of the social etiquette attached to drinking and drinking behaviour. Contemporary writers observed that the Greeks were among the most temperate of ancient peoples. This

appears to result from their rules stressing moderate drinking, their praise of temperance, and their avoidance of excess in general (Hanson 1995).

A variety of alcoholic beverages were used in China since prehistoric times. Alcohol, known in Chinese as *Jiu* was considered a spiritual food rather than a material (physical) food. Alcoholic drinks were widely used in all segments of Chinese society as a source of inspiration, were important for hospitality, were considered an antidote for fatigue and throughout the "rite de passage" from birth to death and were sometimes misused. A Chinese imperial edict of about 1116 BC makes it clear that the use of alcohol in moderation was believed to be prescribed by heaven (Hanson 1995). In India, alcoholic beverages were in use between 3000 BC and 2000 BC. Sura, a beverage distilled from rice meal, was popular among the warriors and the peasant population. The use of these beverages was well defined within specific social contexts (Peele and Grant 1999).

At the height of the Roman Empire, the shift from ceremonial drinking – confined to banquets and special occasions – to casual, everyday drinking was accompanied by an increase in chronic drunkenness, which today would be labelled alcoholism (Babor 1986). Roman abuse of alcohol appears to have peaked around mid-first century (Jellinek 1976). Wine had become the most popular beverage, and as Rome attracted a large influx of displaced persons, it was distributed free or at cost (Babor 1986). This led to occasional excesses at festivals, victory triumphs and other celebrations, as described by contemporaries. Although there continued to be some criticisms of abusive drinking over the next several hundred years, most evidence indicates a decline of such behavior (Austin 1985). With the collapse of the Roman Empire, religious institutions, particularly the monasteries, became the repositories of the brewing and wine making techniques developed in the ancient world (Babor 1986). It is argued that the early ritualisation of alcohol in Christian Europe and the revulsion of mind-altering psychoactive substances by the church added to alcohol achieving dominance in European nations (Gossop 1989). By the millennium, the most popular form of festivities in England was known as "ales," and both ale and beer were at the top of lists of products to be given to Lords for rent. During the industrial revolution, new beverages, new modes of production, distribution and promotion, and new drinking patterns, customs and institutions evolved (Jernigan 2000). Nowadays, in Asia, Africa and Latin America, socio-economic, political and psychosocial factors have increased the risk of heavy drinking (WHO 2004).

The most important development regarding alcohol throughout the Middle Ages was probably that of distillation. The isolation of ethanol (alcohol) as a pure compound was first achieved by Muslim chemists who developed the art of distillation during the Abbasid caliphate, the most notable of whom were Jabir ibn Hayyan (Geber), Al-Kindi (Alkindus) and Al-Razi (Rhazes) (Hassan and Hill 1986; Hassan 2001). Pure distilled alcohol was first produced by Muslim chemists in the Islamic world during the eighth and ninth centuries. Geber (Jabir Ibn Hayyan, 721–815) invented the alembic still; he observed that heated wine from this still released a flammable vapor, which he described as "of little use, but of great importance to science". Not much later, Al-Razi (864–930) described the distillation of alcohol and its use in medicine (Hassan and Hill 1986). The word was introduced into Europe, together with the art of distillation and the resulting substance itself, around the 12th century by various European authors who translated and popularised the discoveries of Islamic and Persian alchemists (Hassan 2001).

In summary, alcohol throughout history has been valued by various cultures and societies. From the earliest times alcohol has played an important role in religious worship, as a source of nutrients and calories, as a substitute for polluted water, for medicinal and therapeutic purposes and as a social lubricant. However, the harm of purified drugs seems even more apparent when the psychoactive substance is consumed outside their historical and cultural contexts. Whitaker (1987) suggested that distilled alcohol inflicted more havoc on North American Indians and Australians Aborigines than any other drug throughout history.

OPIUM

Opium is an extract of the exudates derived from seedpods of the opium poppy. The opium plant produces lots of small black seeds called poppy-seeds. Poppy-seeds can be ground into flour; used in salad-dressings; added to sauces as flavouring or thickening-agents and the oil can be expressed and used in

cooking. Poppy-heads are infused to make a traditional sedative drink. Opium is a complex chemical mixture containing sugars, proteins, fats, water, meconic acid, plant wax, latex, gums, ammonia, sulphuric and lactic acids and numerous alkaloids, most notably morphine (10%–15%), codeine (1%–3%), noscapine (4%–8%), papaverine (1%–3%) and thebaine (1%–2%).

The poppy plant was cultivated in the ancient civilisations of Persia, Egypt and Mesopotamia. Fossil remains of poppy-seed cake and poppy-pods have been found in Neolithic Swiss lake-dwellings dating from over 4,000 years ago. Plants such as the opium poppy were used by Middle Eastern and Asian Cultures, and brought to Europe through the opening of trade, hostilities and expeditions. Hippocrates, "the father of medicine", dismisses the magical attributes of opium but acknowledges its usefulness as a narcotic and styptic in treating internal diseases, diseases of women and epidemics. References to the juice of the poppy occur in the Assyrian medical tablets of the seventh century BC and in Sumerian ideograms of about 4000 BC. The poppy is called "plant of joy" (Berridge and Edwards 1987). Throughout Egyptian civilisation, priest-physicians promoted the household use of opium preparations and the pharaohs were entombed with opium artefacts by their side. Opium could also readily be bought on the street-markets of Rome. By the eighth century AD, opium use had spread to Arabia, India and China.The Arab physicians such as Ibn-sina (or Avicenna; 980–1037), writing special treatises on its preparations and recommended the plant especially for diarrhea and diseases of the eye.

In England, opium was chiefly used as a narcotic and a hypnotic. The drug's soporific and narcotic qualities appeared in Chaucer's Canterbury Tales and Shakespeare's Othello. Opium was variously called the Sacred Anchor of Life, Milk of Paradise, the Hand of God and Destroyer of Grief. Thomas Sydenham, the 17th-century pioneer of English medicine, introduced the use of opium in medicine. Sydenham, however, went on to standardise laudanum in the now classic formulation: two ounces of opium; one ounce of saffron; a drachm of cinnamon and cloves – all dissolved in a pint of Canary wine. In the 19th century laudanum, a mixture of alcohol solution and tincture of opium, could be bought over the counter at any grocer's shop and for decades it was every family's favourite remedy for minor aches and pains (Royal College of Psychiatrists 1989). Substances with opium-based preparations such as Godfrey's Cordial, a soothing syrup of opium tincture, effective against colic, Street's Infants' Quietness, Atkinson's Infants' Preservative and Mrs. Winslow's Soothing Syrup were used for babies and young children for sedation. In effect, opium was used in preference to alcohol and in various forms for endemic conditions such as malaria. Opium was most popular among the rural peasantry of the Fens (Lincolnshire, Norfolk Cambridgeshire, Huntingdonshire, Northamptonshire and Suffolk, England). The British Medical Association estimated that sparsely populated Cambridgeshire and its environs consumed around half of Britain's annual opium imports. This consumption was topped up by generous use of poppy-tea brewed from homegrown poppies.

By the late-1700's, the British East India Company controlled the Asian opium trade. Opium was already heavily used in China as a recreational drug. In 1839, the Qing Emperor ordered his minister to take action and instructed the confiscation of 20,000 barrels of opium and detained some foreign traders. The British retaliated by attacking the port-city of Canton. Thus began the First Opium War, launched by Britain. The Chinese were defeated and were forced to sign the Treaty of Nanjing in 1842. The British required that the opium trade be allowed to continue; that the Chinese pay a large settlement and open five new ports to foreign trade and that China cede Hong Kong to Britain. A Second Opium War began and ended in 1856 over western demands that opium markets be expanded. The Chinese were again defeated and opium importation to China was formally legalised. By the end of the 19th century, it has been estimated that over a quarter of the adult male Chinese population were addicted.

MORPHINE AND HEROIN

Morphine was first isolated from opium in 1805 by a German pharmacist, Wilhelm Sertürner and named it morphium – after Morpheus, the Greek god of dreams. In the late 19th century, morphine became the drug of choice for high society and middle-class professionals. The development of the hypodermic syringe in the mid-19th century enabled the injection of pure morphine. It was believed that injecting morphine was not addictive

and would be effective treating those with opium dependence. However, the search began for a powerful non-addictive alternative to opium and morphine. Subsequently, the identification of the active alkaloids of opium and the development of the process of acetylation by which morphine is converted to heroin changed the whole pattern of opiate use, not only in the West where the discovery was made, but also in the East, where the parent drug originated (Ghodse 1995). In 1874, English pharmacist C.R. Alder Wright had boiled morphine and acetic acid to produce diacetylmorphine, $C_{17}H_{17}NO$ $(C_2H_3O_2)_2$. Diacetylmorphine was synthesised and marketed commercially by the German pharmaceutical giant, Bayer. In 1898, Bayer launched the best-selling drug-brand of all time, Heroin (http: //opioids.com/).

CANNABIS

Cannabis Sativa (or Indian hemp), more commonly known as cannabis or marijuana was one of the first plants to be cultivated for its non food properties, and was primarily harvested for its fibre. It is thought to have originated in Asia, around 2700 B.C. in China. It was recommended for its pharmacological properties by the Emperor Shen Nung to his citizens for the treatment of pain, gout, absentmindedness and other ailments (Maisto *et al*. 1995). In addition, it has been speculated cannabis was also used for countering of evil spirits and for its psychoactive properties (Abel 1980). With the spread of cannabis to neighbouring countries, in India, this psychoactive substance was regarded as a sacred plant and used for religious function and ritual. Whereas marijuana is the leafy top portion of the plant, hashish, made from the resin, was identified amongst the Arabs around the tenth century (Abel 1980). The use of the drug for its recreational and intoxicating effects appears to be related to the Middle East and North Africa. The drug most probably first reached European countries in the 19th century following the Arab invasion of Spain.

The exposure of cannabis to Europe was also influenced by the printed literature describing the personal experiences in the use of hashish. The medical profession began to show an interest in the use of cannabis by the middle of the 19th century. An Irish physician, William O'Shaughnessy, who has described the medical application of cannabis whilst in India, introduced cannabis in Great Britain (Bloomquist 1971). In France, the use and effects of hashish were described by a small group of writers, intellectuals and artists. In the 1840's, Le Club des Hachishins (The Hashish Club) was founded in an exclusive hotel in Paris. The French authors such as Charles Baudelaire and Theophile Gautier both described the splendours of their hallucinatory experiences in the use of hashish. The elements of mystery, joy, ecstasy, fear and paranoia were described by Gautier. For a description of the experiences see (Gautier 1844/1966). Despite its attraction as a recreational or intoxicating drug, it did not immediately spread in Europe. However, the widespread use of cannabis or hashish for its psychoactive properties in Europe in the 1960's seemed to occur as a result of the cultural movement of the young generation imported from the United States. During the last five decades, cannabis remains the most frequently used illicit drug globally. The plant grows freely throughout the world but is indigenous to Central Asia and the Himalayan region and is cultivated widely in Africa, India, North America and the Caribbean region. Today, cannabis is grown in at least 172 countries, often in small plots by the users themselves (UNDOC 2007) indoor home growing.

COCAINE

The use of the coca leaf dates back to the Inca civilisations and their descendants. The Inca people apparently learned the practice of chewing the coca leaf from the Aymara Indians of Bolivia whose use dates back around 300 BC (Grinspoon and Bakalar 1976). For centuries the coca leaf has been chewed by the Andean Indians of Peru and other South American countries. The coca plant had religious significance and was used for medicine, rituals and burials and for special occasions. The Peruvian Indians use coca to increase their physical strength, to lessen fatigue and to prevent hunger. After the Spanish conquistadores conquered the Inca, they encouraged the use of the coca leaf in the beliefs that it helped the Inca to work longer and harder. In fact, because of its social importance, the Spanish eventually took over coca production and distribution and used coca as a tool to control the conquered population (Petersen 1977).

It was not until the early 1800's that Europeans started to experiment with the use of coca. In the

1850's European chemists were able to isolate the far more potent ingredient in the leaf which they called cocaine. It is the extraction of cocaine from the coca leaf that led to the misuse of the psychocative substance on a global scale. Freud, in his first major publication, "On Coca", advocated the therapeutic and recreational use of cocaine. Freud also thought that cocaine was an aphrodisiac (Byck 1974). He recommended the use of cocaine as a local anaesthetic and as a treatment for drug addiction, alcoholism, depression, various neuroses, indigestion, asthma and syphilis. By the 1880's cocaine was widely available in patent medicines that could be obtained without prescription. These include Mariani's Coca Wine, a best-seller in Europe and Coca-Cola. Cocaine became very popular and was also sold in cigarettes, in nose sprays and in chewing gum (Gossop 1989).

It was not until the 1980's that the United States of America experienced a "cocaine epidemic". However, the acceptance of cocaine has been fostered by an association with glamorous image and compounded with the idea of the "non-addictive" nature of the drug. The consumption of cocaine has increased significantly and is now the second most commonly used illicit substance after cannabis. Coca leaves and other psychoactive substances such as coffee, tea and tobacco were introduced to Europe from South America. The coca plant is indigenous in the Andean Highlands of Bolivia, Columbia and Peru.

AMPHETAMINE

Another psychoactive substance that was synthesised by a Romanian chemist, Lazar Edeleanu, in 1887 was amphetamine. He synthesised the drug from a chemical compound in *Ma-Huange*, a plant found in China. By 1932, amphetamine was marketed in the form of a Benzedrine inhaler for use in the treatment of nasal congestion, mild depression, schizophrenia, alcoholism and obesity. During the 1930's amphetamine was one of the most widely abused psychoactive substances and popular with young people. It is stated in order to get high, young people were taking "the amphetamine strips out of the Benzedrine Inhalers and placing them into a cup of coffee or chewing and swallowing them" (Amphetamine.com). In 1937, "the American Medical Association approved amphetamines in the form of a Benzedrine Sulphate tablet for the treatment of narcolepsy, post-encephalitic Parkinsonism, and minor depression" (Ampheramine.com). Generally, amphetamine became a popular drug of choice for the treatment of minor (neurotic) depression. The prescription of amphetamine by professionals grew rapidly because the drug is deemed to be non-addictive (Carson-DeWitt 2001). However, the adverse effects of amphetamines and the medications that contained amphetamine was first recognised in 1939. During the Second World War, amphetamines were widely used by the armed forces to keep the troops functioning under stressful and physically demanding conditions. During the 1950's, amphetamines were overprescribed by doctors for use in the treatment of common conditions. In the late 1950's, the findings of Connell's study (1958) showed that amphetamine psychosis could happen to anyone, and eventually would, given enough of the drug. Demand for amphetamines continued to be high throughout the early 1960's and 1970's with the discovery that injecting amphetamines (particularly methamphetamine) produced enhanced euphoric effects with a more rapid onset than oral administration. The use of the stimulant became widespread amongst truck drivers, college student athletes and sport men and women to enhance their exploits and performances. More recently, the amphetamines have also been used in the treatment of narcolepsy and hyperactivity in children. It was not until the 1960's that amphetamines misuse resurfaced among young people and subsequently resulted in an epidemic of injection of methamphetamine. In the mid-1990's, a concentrated form of methamphetamine (known as "ice", "glass" and "crystal") was increasing. It is stated that "the first amphetamine epidemic was iatrogenic, created by the pharmaceutical industry and (mostly) well-meaning prescribers. The current amphetamine resurgence began through a combination of recreational drug fashion cycles and increased illicit supply since the late 1980s" (Rasmussen 2008).

HALLUCINOGENIC DRUGS

Hallucinogenic drugs are part of the categories of psychoactive substances which had in the past and still cause intense controversy in their use. Originally called "phantastica" (Lewin 1964), and during the 1960's