Chapter II: Literature Review

2.1 Introduction

The COD phenomenon is complex and multi-faceted and to get a better understanding of it, the following aspects need to be described and discussed: substance related terminology; the continuum of abuse; COD's; psychological theories of CODs; different types of substance-related disorders; treatment of COD's and recovery from COD's. This discussion will focus on revealing the importance of investigating this population in South Africa.

2.2 Substance-Related Terminology

Owing to the complexity of the phenomenon, the related terminology can be confusing and needs detailed explanation. This is partly because it changes so rapidly in accordance with research advances in this field (Sadock & Sadock, 2003). The DSM-IV-TR (APA, 2000) refers to brain-altering substances as **'substances'** (such as cannabis, alcohol, morphine etc.) and to the related disorders as 'substance-related disorders' (such as cannabis dependence, alcohol abuse etc.)

Legal substances are not separated from illegal substances, because legal substances (such as morphine) are often obtained by illegal means. The word **'drug'** implies a manufactured chemical and this makes it an unsuitable term to use in the field of

addiction. This is because many substances that people abuse occur naturally (such as opium) and are not made for human consumption (such as industrial solvent) (Sadock & Sadock, 2003).

2.3 The Continuum of Abuse

Sadock and Sadock (2003) describe people's use of substances as being on a continuum. On the one end is **moderate use**, which can be healthy, as some substances play a positive role in some people's lives. For example, people may occasionally enjoy a glass of wine at the end of a long day to relax and unwind. This **social or recreational** use of substances is widely accepted in society as being normal and healthy. For healthy individuals, who are not taking any medication, up to two drinks of alcohol a day has been associated with the following beneficial effects: increasing socialisation, stimulating the appetite, decreasing macular degeneration and gallstones and decreasing the risk of heart disease (Schuckit, 2000).

The distinction between healthy and unhealthy use is very vague and there is huge debate surrounding the recreational use of substances, for example ecstasy. Research in South Africa showed that 90% of individuals questioned admitted to using ecstasy occasionally, but denied that their substance use caused any problems for them (Zervogiannis, Wiechers & Bester, 2003). Schuckit (2000) contends that if an individual consumes more than two drinks a day and/or drinks when they were unhealthy, the healthcare professional needs to become suspicious that the individual may be an alcoholic. It is

clear that it is not easy to distinguish between the people whose substance use is healthy versus the people whose substance use causes significant problems in their lives. One of the reasons for this dilemma is the mechanism of denial that is very prevalent in user's lives. This psychological defense mechanism prevents users from consciously being aware of the negative effects their substance use is having on their lives (Sadock & Sadock, 2003).

According to professionals in the field, as one moves along the continuum of abuse, substance use becomes more and more unhealthy and has consequences that are more negative for the person. '**Substance abuse'** is closer to the benign end of the continuum with **'dependence'** being at the more severe end (Sadock & Sadock, 2003; Schuckit, 2000). Whether or not a user will become dependent on a particular substance seems to have some relationship with the withdrawal symptoms related to the substance. For example, heroin has more extreme withdrawal symptoms than marijuana. Heroin may be more likely to cause the user to become dependent on this substance, as a person is likely may use more and more, to alleviate their withdrawal symptoms (Schuckit, 2000).

Part of the continuum of abuse pertains to the type of substance used. The gateway theory (Adler & Kandel, 1981, as cited in Gold & Tullis, 1999) proposes that the use of alcohol and/or cannabis (considered by many people not to be serious drugs) often leads to the use of more 'serious' substances, such as cocaine or heroin. According to this theory, accessibility and comfort with taking substances are the mechanisms that allow people to move from less severe substance use (alcohol or cannabis) to more severe substance use

(cocaine or heroin). However, this argument falls short because studies have indicated that many individuals use cannabis, but do not go on to use other substances. Despite some evidence of substance abuse taking a predictable pathway, there is also evidence of great individual variability in the pathway that an individual takes. Schuckit (2000) notes that there are even heroin users who manage to maintain irregular use of this substance, without becoming dependent on it. This is despite the widespread belief that as a serious drug, once heroin is used, it is impossible not to become addicted to it.

Terms such as **'psychological'** and **'physiological dependence'** are also part of the continuum of abuse debate. Psychological dependence or habituation is described by Sadock and Sadock (2003) as a constant or intermittent craving for a substance in order to avoid negative emotions. Physiological dependence is characterised by symptoms of tolerance and withdrawal and in extreme cases can lead to death (Kosten & Singha, 1999)

Broadly categorised, substance-related disorders include substance dependence, substance abuse, substance intoxication, substance withdrawal, and various other substance-induced disorders (APA, 2000). Authors writing in the field of addiction often use substance abuse and substance dependence interchangeably. However, their diagnostic classification differs according to DSM-IV-TR (APA, 2000).

The criteria for a diagnosis of substance abuse are as follows:

A. A maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by one (or more) of the following, occurring within a 12-month period:

1. Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home (e.g., repeated absences or poor work performance related to substance use; substance-related absences, suspensions, or expulsions from school; neglect of children or household)

2. Recurrent substance use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by substance use)

3. Recurrent substance-related legal problems (e.g., arrests for substance-related disorderly conduct)

4. Continued substance use despite having persistent or recurrent social or interpersonal problems caused by or exacerbated by the effects of the substance (e.g., arguments with spouse about consequences of intoxication, physical fights)

B. The symptoms have never met the criteria for substance dependence for this class of substance. (APA, 2000, p.199)

Substance dependence often refers to substance addiction, but there is debate about using these terms interchangeably (Sacks & Ries, 2003). The term addiction was described as being unscientific by the World Health Organisation (WHO) in 1964 and replaced by the word dependence. Addiction does not specify the behavioural and physical characteristics, which dependence does. This allows people to describe anything as being addictive. Common references to what could be addictive include sex, food, stealing and gambling. These addictions may have similar effects on the reward systems of the brain, but are not included in the DSM-IV-TR's (APA, 2000) categories of potentially dependence inducing substances (Sadock & Sadock, 2003).

The criteria for a diagnosis of substance dependence are as follows:

> A maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring within a 12-month period:
>
> 1.Tolerance, as defined by either of the following:
>
> a. A need for markedly increased amounts of the substance to achieve intoxication or desired effect.
>
> b. Markedly diminished effect with continued use of the same amount of the substance.

2. Withdrawal, as manifested by either of the following:

a. The characteristic withdrawal syndrome for the substance (refer to the DSM-IV-TR, Criteria A and B of the criteria sets for withdrawal from the specific substance).

b. The same (or 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. There is 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 the 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 persistent or recurrent physical or mental health problems that

> are likely to have been caused or exacerbated by the substance (e.g., current cocaine use despite recognition of cocaine-induced depression, or continued drinking despite recognition that an ulcer was made worse by alcohol consumption). (APA, 2000, p.197)

The DSM-IV-TR criteria are the most widely accepted and used, however, one other diagnostic system is gaining in popularity and has a different approach to classifying substance related disorders. The ICD-10 differs in their diagnostic criteria for a substance dependence disorder. Firstly, they have a broader range of psychoactive substances included in their list, compared to the DSM-IV-TR. This list includes caffeine, tobacco and volatile solvents (Sadock & Sadock, 2003). The ICD-10 also includes a section on non-dependence producing substances, such as antidepressants, laxatives, analgesics, and vitamins. Mental and behavioural characteristics are described as being related to disorders pertaining to the specific psychoactive substance. Guidelines are given for identifying the substance and determining the specific nature of the disorder (Sadock & Sadock, 2003). This study has focused on the DSM-IV-TR guidelines because the data used in this study was established though the implementation of this classification system. However, it is important to take note of alternative classification systems because they inform how a problem is diagnosed and understood. This will ultimately affect how the problem is treated and ultimately the client's quality of life.

2.4 What are Co-Occurring Disorders?

The substance abuse literature describes a COD as a phenomenon in which a person is diagnosed with one or more substance-related disorder as well as with one or more other psychiatric diagnosis, including personality disorders (Beeder & Millman, 1997; Sadock & Sadock, 2003; Vaillant, 2000). The term 'co-occurring disorder' is contentious due to the nature of what the term actually refers to. For example, someone suffering from schizophrenia and major depressive disorder (MDD) will not be considered to have a COD by health care professionals. However, people with a substance-related disorder and another psychiatric disorder are considered to have a COD. The COD phenomenon highlights the distinction that is made in the healthcare profession between a medical versus psychological problem (Swartz, 1998). Traditionally, substance abuse has been thought of as a medical problem and rehabilitation programmes most often use treatment strategies based on the disease model (Vaillant, 2000). This model locates pathology in the body. Alternatively, mood disorders such as MDD have traditionally been treated from a cognitive perspective, which locates pathology in the mind. These contradictions account for much of the debate surrounding CODs (Sacks & Ries, 2003). These debates focus on trying to establish a causal relationship between the two disorders, as discussed below.

A point that is not debatable is that there is a strong link between substance-related disorders and co-occurring psychiatric disorders. From the available research it has been shown that this comorbidity rate is between fifty and ninety percent (Alverson et al.,

2000; Beeder & Millman, 1997; Strathdee et al., 2002; Weaver et al., 2002). Researchers have found that prevalence rates of COD's differ according to the type of treatment facility that clients make use of. This suggests that a complex relationship between substance-related and co-occurring psychiatric disorders. The rate of CODs found in community mental health setting was 37%, for in-patient settings 56%, for forensic services 62%, for substance use services 93% and for primary care services 24% (Strathdee et al., 2002). There are various theories concerning the existence of the COD phenomenon.

2.5 Psychological Theories of Co-Occurring Disorders

Depending on their theoretical orientation, various authors have different explanations for the COD phenomenon (Brown & Bennett, 2004; Harvard Mental Health Letter, 2003; Henquet et al., 2005; Hovens, Cantwell & Kiriakos, 1994; Romach & Sellers, 1998; Sacks & Ries, 2003; Vaillant, 2000). There are five main theories that have been used by people in the field of addictions to understand this population. These are as follows: The self-medication/the psychiatric disorder is premorbid hypothesis, the substance-related disorder is premorbid hypothesis, the CODs developed from a common vulnerability for both disorders hypothesis, the CODs exacerbate the symptoms of psychiatric and substance-related disorders hypothesis and the no causal relationship hypothesis.

2.5.1 The self-medication/the psychiatric disorder is premorbid hypothesis

The self-medication hypothesis proposes that people abuse substances as a way to self-medicate their underlying psychiatric disorder. This suggests that the psychiatric disorder caused the substance-related disorder (Vaillant, 2000). One proposed aspect of this causal relationship is due to the negative symptoms associated with psychiatric disorders. For example, a person suffering from depression supposedly abuses alcohol as a way to relieve their feelings of sadness. Although commonly used as a theory to understand the COD phenomenon, there is contradictory evidence for this theory (Romach & Sellers, 1998). It is commonly thought that individuals abuse alcohol as a way to alleviate anxiety, however, Wilson (1988, as cited in Romach & Sellers, 1998) concluded that people need to be wary of making conclusive reports about this process. For example, anxiety reduction in individuals is affected by the amount of alcohol consumed, physiological differences in response to alcohol, previous experience with alcohol, expectations about substance use and gender (Romach & Sellers, 1998).

For individuals with more disabling mental disorders, the threshold of substance use that may be harmful may be significantly lower than for individuals without these same disorders (Sacks & Ries, 2003). This suggests that the severity of existing disorders lowers the threshold controlling the amount of substances that an individual needs to take in order to feel the effects. This could explain why individuals with severe psychiatric disorders take larger quantities of substances, thereby facilitating the development of a substance-related disorder. However, there is no conclusive evidence of this relationship.

2.5.2 The substance–related disorder is premorbid hypothesis

This theory suggests that people who abuse substances are more likely to develop a psychiatric disorder than those who do not (Vaillant, 2000). In his study titled *'The Natural History of Alcoholism'*, Vaillant (2000) investigated over 600 individuals for 55 years. The results from this longitudinal study made him adamant that depression was a result, rather than a cause of alcohol abuse. Arguing from a medical perspective that views alcoholism as a disease, Vaillant (2000) did contend that depression or any psychiatric disorder could exacerbate the alcoholism, as it would for any chronic medical condition.

Individual variability may account for evidence that individuals who have a predisposition to psychiatric disorders are more likely to develop these disorders when exposed to certain substances, than those without this predisposition. Research has shown that adolescents with a predisposition for psychosis were more likely to develop psychotic symptoms when abusing substances, than those without this predisposition. Henquet et al. (2005) found that exposure to cannabis as an adolescent and young adult increases ones risk of psychotic symptoms in later life. The greater the use of cannabis the greater the level of risk for psychotic symptoms. This research study did not support the self-medication hypothesis, as the baseline measure of psychosis did not predict future cannabis use. The results indicate that the more cannabis one uses the more likely one is to become psychotic. This tendency is much stronger for those who have a psychotic predisposition than for those who do not (Henquet et al., 2005).

Sharlene and Shane (2004) compared psychological symptoms reported by injecting versus non-injecting cocaine users. For both groups it was discovered that overall negative psychological symptoms increased after taking substances, however, these symptoms differed for the two groups. For the injecting cocaine users the symptoms reported most were mania, hallucinations and paranoia (all associated with psychosis). For the non-injecting cocaine users the symptoms most reported was anxiety. These findings suggest that the method of substance administration may influence the type of psychological symptoms and possible disorders that one could develop because of substance use.

2.5.3 The co-occurring disorders developed from a common genetic vulnerability for both disorders hypothesis

Proponents of this theory postulate that substance abuse and co-occurring psychiatric disorders originate from a common vulnerability for both disorders (Hovens et al., 1994). In her recently developed theory, Volkow (as cited in McGowan, 2004), one of America's most prominent drug addiction researchers and the director of the National Institute on Drug Abuse (NIDA), argues that people with attention deficit hyperactivity disorder (ADHD) and those who are dependent on substances share a similar genetic brain structure. They both have an impervious dopamine circuitry. This means that for the person with ADHD, stimulants, such as Ritalin and other drugs help them concentrate better. Similarly, a person who is prone to abusing substances finds the effects of drugs pleasing because the effects are not as overwhelming as they are for other people. Others

without this same brain mechanism find the effects of these sorts of substances too overpowering and therefore are not as likely to abuse them (McGowan, 2004). Evidence that is more conclusive is needed in this area of research because it is a new field.

2.5.4 The co-occurring disorders exacerbate the symptoms of psychiatric and substance-related disorders

This theory proposes that individual's psychiatric symptoms are exacerbated by substance abuse and vice versa. This reasoning is accurate considering that symptoms of depression and anxiety are most commonly associated with withdrawal from all classes of substances (Sadock & Sadock, 2003). A client may have mild symptoms of anxiety that were made worse by substance abuse because withdrawal causes more severe anxiety related symptoms. Alternatively, substance abuse may be exacerbated by increasingly severe psychiatric symptoms. In these cases, a client may be using substances to alleviate mild anxiety. Instead of the desired effect, the anxiety symptoms may increase and thereby increase the likely hood that the person will use higher and higher doses of the substance. In these cases, social substance use is likely to evolve into substance dependency instead of remaining a relatively benign problem (Sadock & Sadock, 2003).

2.5.5 No causal relationship hypothesis

Findings from this body of research conclude that there is no univariate relationship between substance abuse and other psychiatric disorders. Research conducted by DATOS revealed that as the rates of psychiatric disorders increases, the number of substance use disorders increases. This shows that there is a relationship between the number of substances used and the number of psychiatric disorders diagnosed. However, there is still no clarity regarding the causality of this relationship (Sacks & Ries, 2003)

A one-way relationship between CODs seems impossible when one considers the multitude of different types of diagnoses and patient histories that could be paired. For example, the person who is abusing ecstasy and then develops GAD has a completely different set of characteristics from the person who has antisocial personality disorder and abuses cannabis (Brown & Bennett, 2004; Harvard Mental Health Letter, 2003).

Part of the reason for these individual differences is the various ways individuals react to substances, including the various psychiatric symptoms that individuals can develop as a consequence of substance use. Reactions to substances vary considerable from person to person and are affected by the following variables: Biological variables, such as age, weight, biological rhythms, personality, physiological state, and genetics. Substance variables, such as dose, method of use, frequency of use, and co-administration of other substances. Environmental variables, such as temperature, degree of crowding, lighting, noise levels, and cleanliness (Leavitt, 1995). With this many variables affecting the user,

it is understandable that the way people react to substances varies considerably. This explains why some individuals may develop psychiatric symptoms when abusing substances, while others do not. This variety of symptoms may or may not be ameliorated through substance use. For example, for some individuals with anxiety symptoms, alcohol may help alleviate their symptoms. However, there is huge variability in the way alcohol affects individuals (Romach & Sellers, 1998). This allows for the possibility that for some people alcohol may exacerbate their symptoms of anxiety, thereby decreasing their likelihood of abusing this substance. This debate shows that there is huge individual variability that needs to be accounted for when working with the client who has a COD. Rather than draw causal links between their disorders it may be more helpful to view them in a more holistic sense.

It is clear that the relationship between the two diagnoses is a complex one. This relationship highlights the mind-body dualism that is the pervasive philosophy in western society. This philosophy continues to have a huge impact on the way people with a COD are understood and treated (Swartz, 1998). Over ten years ago, Hovens et al. (1994) concluded that psychiatric disorders might precede, develop as a consequence of, exacerbate, be linked to, not be related to, or originate from a common vulnerability for substance abuse. Since then, there seems to have been little development in understanding this complex relationship. It seems most likely that, as with many things in life, there is no simple cause-effect relationship. Rather multiple variables are responsible for multiple effects, which in turn have multiple effects, and the cycle continues.

2.6 Categories of Substance-Related Disorders

Sadock and Sadock (2003) describe various categories that substance-related disorders can be divided into. These divisions are open to debate with other authors categorising various substances differently. For example, methylenedioxyamphetamine (MDMA) is most commonly used for its energising properties, however, in some instances it induces hallucinations. Some authors, such as Sadock and Sadock (2003) argue that MDMA should be categorised in the class of amphetamine-related substances, while others, such as Leavitt (1995) argue that it should be classed as a hallucinogen-related substance. Sadock and Sadock (2003) categorise substances according to their molecular structure, and not according to the effects they induce. The researcher has categorised the substance-related disorders according to Sadock and Sadock's (2003) criteria because this is the same criteria used in the DSM-IV-TR to diagnose the various disorders (APA, 2000).

2.6.1 Alcohol-related disorders

Described as the most commonly abused substance, alcohol is abused because it causes loss of inhibitions, a feeling of euphoria and decreased anxiety. After initial ingestion, alcohol performs as a central nervous system depressant. The negative side effects of this substance include irritability, violent behaviour, and depressive symptoms. Withdrawal symptoms include insomnia, hyperactivity of the autonomic nervous system and feelings

of anxiety (Sadock & Sadock, 2003). Alcohol is associated with violence, crime and traffic-related accidents in South Africa (Pluddeman et al., 2004).

2.6.1.1 Comorbidity

According to Sadock and Sadock (2003), the psychiatric disorders most commonly associated with alcohol related disorders are as follows: antisocial personality disorder, mood disorders and anxiety disorders. Results found by the Drug and Alcohol Treatment Outcome Study (DATOS), as reported in the CSAT TIP 42 (2003) revealed that 35% of people who are dependent on alcohol had antisocial personality disorder, 18% had MDD and 5.5% had GAD (Sacks & Ries, 2003). Weaver et al. (2002) discovered that the prevalence rates of mental health problems for those seeking treatment in alcohol misuse services were as follows: 19% had a co-occurring psychotic disorder, 53% had a personality disorder, 47% had severe depression and 32% had severe anxiety.

2.6.2 Amphetamine (or amphetaminelike)-related disorders

Commonly known as analeptics and/or stimulants, these drugs are used to increase energy and performance, induce a feeling of euphoria, heighten the user's sense of sexuality, and increase self-confidence (Pluddeman et al., 2004). Common sub-classes of these drugs include dextroamphetamine, methamphetamine ('Tik') and methcathinone ('CAT'). This category of drugs is used to treat ADHD, narcolepsy, obesity, depression, dysthymia and chronic fatigue syndrome. The amphetaminelike substances are

pseudoephidrine and ephidrine. The most common substituted amphetamine is MDMA, commonly known as ecstasy. The withdrawal symptoms of these drugs include anxiety, tremulousness, dysphoric mood, lethargy, fatigue, nightmares, profuse sweating, headache, muscle cramps, stomach cramps and insatiable hunger (Pluddeman et al., 2004; Sadock & Sadock, 2003). Fifty percent of methamphetamine users in South Africa report engaging in violent behaviour and 25% of these attribute this behaviour to their substance abuse (Pluddeman et al., 2004).

2.6.2.1 Comorbidity

Amphetamine users have been found to have a stronger correlation with rates of depression, ADHD, and anti-social personality disorder than rates found in the general community (Kosten & Singha, 1999). During binge episodes, users can experience stimulant-induced psychosis. This is related to the dose used, rather than psychiatric predisposition. The psychiatric symptoms associated with long-term methamphetamine use include confusion, impaired concentration and memory, hallucinations, delusions, insomnia, depression, panic disorders and paranoia (Pluddeman et al., 2004; Sadock & Sadock, 2003).

2.6.3 Cannabis-related disorders

Described as the most commonly used illicit drug in the world, cannabis is commonly referred to as marijuana, hashish, hash, grass, pot, weed, tea and dagga (Leavitt, 1995;

Sadock & Sadock, 2003). Taken for its calming effect, cannabis also induces a feeling of euphoria and helps facilitate social interactions (Leavitt, 1995). Withdrawal from this drug can cause increased irritability, restlessness, insomnia, anorexia and mild nausea (Sadock & Sadock, 2003).

2.6.3.1 Comorbidity

Cannabis has been shown to have a strong relationship with psychotic disorders. Recent South African research revealed that clients suffering from first onset psychosis were more likely to choose cannabis over other substances than those in the control group (Brink, Oosthuizen, Emsley, Mbanga & Keyter, 2003). The majority of research findings indicate that cannabis abuse or dependence does not necessarily induce lifetime psychotic disorders, unless the user has a predisposition for psychosis (Brink et al., 2003; Schuckit, 2000). Similarly, Schuckit (2000) concluded that research has not been able to show the existence of co-occurring mood or anxiety disorders in the population of people who meet the diagnostic criteria for cannabis abuse or dependence.

2.6.4 Cocaine-related disorders

Cocaine and its more potent partner crack induce feelings of elation, euphoria, increased self-esteem and the perception of increased ability to perform mental and physical tasks. Withdrawal from this category of drugs can cause posttoxication depression (crash),

dysphoria, anhedonia, anxiety, irritability, fatigue, hypersomnolence and agitation (Sadock & Sadock, 2003).

2.6.4.1 Comorbidity

Sadock and Sadock (2003) describe mood disorders as those most likely to follow the onset of cocaine-related disorders. Anxiety disorders, antisocial personality disorder and ADHD are those most likely to precede the development of cocaine-related disorders. Results by DATOS, as reported in CSAT TIP 42 (2003) found that 30% of people who were dependent on cocaine had antisocial personality disorder, 8% had MDD and 3% had GAD (Sacks & Ries, 2003). O'Brien, Wu and Anthony (2005) found that cocaine use was associated with a three to four times higher rate of panic attacks. When comparing the psychological symptoms of injecting versus non-injecting cocaine users in Australia, some interesting results were found. Sharlene and Shane (2004) found that the most common psychological symptoms reported for both groups were depression, anxiety and paranoia. The injecting group was more likely to experience at least one serious psychological symptom since using cocaine in the last 12 months. For the injecting cocaine users, the symptoms reported most were mania, hallucinations and paranoia (all associated with psychosis). For the non-injecting cocaine users the symptoms most reported was anxiety. These findings suggest that the method of substance administration may influence the type of psychological symptoms and possibly disorders that one could develop as a consequence of substance use (Sharlene & Shane, 2004).

2.6.5 Hallucinogen-related disorders

These drugs are commonly called psychedelics or psychotomimetics. They induce hallucinations and the user experiences a loss of contact with reality as well as experiences of expanded and heightened consciousness (Leavitt, 1995). The classic hallucinogen is lyseric acid diethylamide (LSD). Tolerance can develop to this substance, but no withdrawals symptoms occur (Sadock & Sadock, 2003).

2.6.5.1 Comorbidity

Schuckit (2000) concludes that the majority of people who seek treatment for this type of substance abuse present as extremely anxious or depressed. However, these mental states are temporary and subside within a few hours. Similarly, psychotic symptoms are transitory, unless the user has a predisposition for psychosis, in which case the induced psychotic state, may be long lasting. Flashbacks, defined as a recurrence of the effects of the substance are also associated with this substance. These may be in the form of an episode of hallucinations and delusions that occurs some time after a hallucinogen has been taken (Schuckit, 2000).

2.6.6 Opioid-related disorders

Opioids are commonly recognised by the names opium, heroin, codeine and morphine. This class of drugs lowers the user's threshold for feeling pain and induces a euphoric

state (Leavitt, 1995). Withdrawal symptoms include an intense craving for the substance, insomnia and a feeling of bugs crawling under ones skin (Sadock & Sadock, 2003).

2.6.6.1 Comorbidity

Ninety percent of people with a diagnosis of opioid dependency have an additional psychiatric disorder according to Sadock and Sadock (2003). The most common CODs are MDD, antisocial personality disorder and anxiety disorders. Ninety percent of heroin-dependent men recruited from Greek prisons and treatment services had a COD. Based on DSM-III criteria, the most common lifetime disorders were anxiety (31%) and affective/mood (25%). Antisocial personality disorder had a prevalence rate of 69%. It was found that in the majority of cases the psychiatric disorders preceded the substance dependence. For 97% of clients with antisocial personality disorder and 79% with anxiety disorders, the psychiatric disorders preceded the substance dependence. Affective/mood disorders were evenly distributed before and after the onset of the substance-related disorder (Kokkevi & Stefanis, 1995).

DATOS research, as reported in CSAT TIP 42 (2003) found that 27% of people who were dependent on heroin had a co-occurring anti-social personality disorder, 7% had MDD and 2% had GAD (Sacks & Ries, 2003).

2.6.7 Sedative-, hypnotic-, or anxiolytic-related disorders

This class of drugs is known for its sleep inducing and anxiety reducing qualities. Commonly known as benzodiazepines or barbituates, users experience a state of mental calmness when taking these drugs. Included in this category are the barbituatelike substances, such as methaqualone, otherwise known as mandrax (Sadock & Sadock, 2003).

2.6.7.1 Comorbidity

These classes of substances are used to treat depression, anxiety and sleep disorders and accordingly these are the disorders most associated with the abuse of these substances (Smith & Wesson, 1999). Schuckit (2000) argues that symptoms of delirium and dementia are also associated with this class of substances.

2.6.8 Polysubstance dependence

According to the DSM-IV-TR (APA, 2000), for this diagnosis to be given, an individual has to have repeatedly used substances from at least three categories (not including caffeine and nicotine) for a period of 12 months. During this time the criteria for substance dependence needs to have been met for the substances considered as a group.

The 2004 SACENDU research brief states that the abuse of two or more substances is high in South Africa. In Cape Town, a reported 50% of patients indicated abusing more than one substance (Pluddeman et al., 2004). These people would not necessarily meet the diagnostic criteria for polysubstance dependence, but this finding shows that people often abuse more than one substance at a time. Research conducted by DATOS revealed that as the rates of psychiatric disorders increases, the number of substance use disorders increases. This shows that there is a relationship between the number of substances used and the number of psychiatric disorders diagnosed. However, there is still no clarity regarding the causality of this relationship (Sacks & Ries, 2003).

2.6.9 Other substance-related disorders

These are not the only substance-related disorders listed in the DSM-IV-TR (APA, 2000). Nicotine-related disorders, caffeine-related disorders, inhalant-related disorders and phencyclidine (or phencyclidinelike)-related disorders are also listed. For the purposes of this study, these categories have not been included. The reason for this is that none of these or not enough of these categories was/were recorded as being substances that the clients were seeking treatment for. This is because either the substance is not considered to have enough of a negative impact for the client to want to seek treatment for (nicotine, caffeine, and inhalants) or the substance is not readily available in South Africa (phencyclidine).

2.7 Substance-Induced Disorders

Substance-induced disorders are different from independent psychiatric disorders. They differ in that all or most of the psychiatric symptoms are a direct result of the substance use (Sacks & Ries, 2003). Each class of drugs mentioned above has a different (and sometimes overlapping) effect on the chemical composition of the human body. These effects range from biological (such as an increased heart rate), to psychological (such as a feeling of euphoria) and social (such as absenteeism due to substance use) (Pluddeman et al., 2004). These effects are responsible for inducing certain psychiatric disorders. There is considerable debate surrounding the substance-induced disorders because it is difficult, if not impossible to distinguish if the disorder was substance-induced, or if it was premorbid. Another possibility is that the symptoms are transient and caused by withdrawal from the particular substance (Schuckit, 2000). There is no conclusive research suggesting a simple cause-effect relationship, such as, chronic cannabis use causes schizophrenia. Alternatively, most researchers conclude that the causes of substance use are multiple as are the impacts on biological, psychological and social (bio-psychosocial) aspects of the user's life (Durrant & Thakker, 2003).

2.8 Treatment

Treatment of substance abuse or dependency takes many forms and is often complicated by the existence of a comorbid psychiatric diagnosis. It is unclear how best to treat COD's, with debate about which problem to treat first, or whether to treat them together

(Alverson et al., 2000; Beeder & Millman, 1997; Sadock & Sadock, 2003). Diamond (2000) contends that how the client with a COD is treated depends on the model in which the healthcare professional was trained, as this influences the way the problem is conceptualised and understood.

Traditional approaches to treating the client with a COD focus on the substance-related disorder, with little emphasis on the co-existing psychiatric disorder. This medical model views the co-morbid psychiatric condition as being a result of the substance abuse in the majority of cases. From this perspective, if the substance abuse is successfully treated (sobriety is maintained), the co-occurring psychiatric disorder will usually disappear (Vaillant, 2000).

Current perspectives contend that treatment should take an individual focus that is tailor-made to suit the individual who inevitably has a unique comorbidity of diagnoses, different cognitive abilities and different levels of motivation for treatment (Stanley & Pearson, 2003; Sacks & Ries, 2003). For example, a client who abuses cannabis, has schizophrenia, is unmotivated for treatment and has an average cognitive ability; will not require the same treatment as a client who abuses alcohol, suffers from depression and is motivated for treatment. Proper screening and assessment to establish the specific combination of COD's is necessary in order to plan an appropriate intervention strategy (Stanley & Pearson, 2003). The CSAT TIP 42 describes four different 'quadrants of care' to asses what level of treatment a client needs. These are as follows: 1) Less severe mental disorder and less severe substance use disorder; 2) More severe mental disorder

and less severe substance disorder; 3) Less severe mental disorder and more severe substance disorder; 4) More severe mental disorder and more severe substance disorder. These quadrants guide the type of treatment an individual should receive. For example, a client assessed to be in the fourth quadrant would require intensive inpatient treatment, while an individual in the first quadrant would require less intensive outpatient treatment (Sacks & Ries, 2003).

Project Match is a research initiative conducted in the United States investigating individual client characteristics in relation to different types of therapy. This information is then compared to treatment outcomes. Recent work in this area shows that assessing the intensity of client anger has important implications regarding the type of techniques the counsellor uses with this person. It was found that for high anger clients directiveness was associated with worse drinking outcomes. For low anger clients, directiveness was associated with less frequent drinking (Karno & Longabaugh, 2004). Conclusive evidence regarding what type of client suits what type of therapy is still an unanswered question (Hubbard, 1997). A better understanding of the COD population may help solve some of the questions around the topic of the best way to treat such a client.

There is consensus that treatment for the client with a COD needs to be comprehensive, integrated, and continuous. Comprehensive refers to the idea that treatment should be capable of responding to the multiple problems that each individual client experiences. The treatment plan should be made with the client's input. Integration concerns combining substance abuse and mental health treatment, thereby treating the individual as

a unitary whole and not as two separate mind-body divisions. Continuous treatment means that the client may need to be treated for months, or possibly years. Coherent care spanning a long period is therefore needed (Sacks & Ries, 2003).

The therapeutic process can be complicated when treating the COD client. The healthcare professional is inevitably dealing with two or more diagnoses, which each have specific symptoms, complexities and associated complications. All disorders need to be monitored simultaneously in order to be alert for any chances of relapse. The CSAT (Sacks & Ries, 2003) stresses the importance of maintaining a therapeutic alliance with these clients. Strong countertransference is seen by therapists as being a hindrance to this process because of the negative feelings evoked in the healthcare professional by this type of client. Frustration is often one of the main concerns, as COD clients can be extremely difficult to work with (Beeder & Millman, 1997). A supportive, empathic and culturally appropriate approach is endorsed by experts in the field (Sacks & Ries, 2003). Motivational interviewing is offered as strategy aimed at resolving the client's ambivalence about change. This strategy helps the client's explore their understanding of the problems they experience (Sacks & Ries, 2003). Cognitive behavioural techniques have also been found to be beneficial in treating this population. A culturally aware and unbiased attitude is imperative to this type of work. For example, a client who views their hallucinations as being a communication from their ancestors needs to be worked with by respecting this belief, and at the same time negotiating a treatment plan that would best suit this client within their belief system. In South Africa, this intervention strategy may need to include a consultation with a traditional healer, who would be able to offer advice

about how this client could best be treated (Sacks & Ries, 2003; Swartz, 1998). Pharmacological advances over the past decade have ensured that many disorders can be treated successfully, without many adverse side effects, provided a strict medication regime is adhered to. This makes adherence an important part of any treatment process (Sacks & Ries, 2003).

There is contradictory research concerning the investigation of CODs and treatment outcomes. Ryan, Plant and O'Malley (1995) found that psychiatric severity had no relationship to client treatment dropout rate, for clients seeking treatment for alcohol abuse. Interestingly they found that some form of emotional distress, including psychiatric disturbance was responsible for motivating alcohol abusers to seek treatment. Considering that psychiatric disorders create heightened emotional distress, there may be truth in the Alcoholics Anonymous's (AA) belief that an alcoholic has to be desperate before deciding to engage in an intervention (Ryan et al., 1995). These findings have important treatment implications. For example, the results indicate that efforts to enhance client's internal motivation are a good way to improve their chances of attending treatment. This implies that treating a person diagnosed with MDD with anti-depressants may decrease their apathy and increase their motivation for substance abuse treatment. Alternatively, this approach may decrease the client's motivation for substance abuse treatment because their levels of emotional distress have decreased (Ryan et al., 1995). This debate highlights the complexity of the COD phenomenon and the need to be extremely vigilant when treating this population.

These dilemmas are further complicated for the substance abuser who has multiple psychiatric disorders and who abuses multiple substances. Research conducted by DATOS revealed that as the rates of psychiatric disorders increases, the number of substance use disorders increases. This further complicated treatment. This shows that there is a relationship between the number of substances used and the number of psychiatric disorders diagnosed. However, there is still no clarity regarding the causality of this relationship (Sacks & Ries, 2003). These findings highlight the difficulties of treating the COD population, verifying the need for more research in this area.

2.9 Recovery

There is no single definition of recovery, other than it being a process and the goal of all substance dependence/abuse treatment programmes. Recovery means different things for different people and it may be further complicated for the client with a COD. Schuckit (1999) describes three general goals of recovery: To achieve a substance free lifestyle, to maximise various aspects of daily functioning and to prevent relapse. Relapse can be defined as failing to maintain behaviour change over time (Daley & Marlatt, 1997). Relapse is considered a part of the recovery process and as a way to attain an eventual relapse free lifestyle. The importance of achieving a substance free lifestyle is, however, debatable, as it may be possible to return to the social use of alcohol after being diagnosed as abusing this substance (Vaillant, 2000).

COD's further complicate recovery because ameliorating psychiatric symptoms is another facet of this process. This shows how recovery from a COD cannot only be seen from a substance abuse perspective. If treated only from this perspective, the symptoms the client experiences as part of their psychiatric diagnosis may still be present, even though they are not abusing their substance of choice anymore. In these cases, the clients may have a substance free lifestyle, but still have a decreased sense of optimal daily functioning. Alternatively, minimal use of a substance such as alcohol, may improve their general life satisfaction by decreasing psychiatric symptoms, however, will mean that they are not living a substance free lifestyle (Daley & Marlatt, 1997; Myers, Brown & Mott, 1995).

These may be some of the reasons that it has been shown that COD's are associated with higher rates of relapse following substance abuse treatment programmes (Mclellan, Luborsky, Woody, O'Brien & Druly, 1983, as cited in Compton et al., 2003). Substance focused treatment approaches may not take full cognisance of the complex relationship of the two coexisting disorders. Hubbard (1997) explains how individual client characteristics are important to assess as they may affect treatment outcome, including chances of relapse. Research findings indicate that certain psychiatric disorders predict worse outcomes in drug treatment programmes than others. A diagnosis of MDD has been found to predict abusing a larger number of substances and having more drug dependence diagnoses and symptoms. It was found that women with phobias had better treatment outcomes than men. Men with psychiatric disorders in general, those with

MDD and those with antisocial personality disorder had worse treatment outcomes, than women with these same disorders (Compton et al., 2003).

Compton et al. (2003) highlight the need to prevent the risk of relapse by further understanding the relationship between CODs and substance abuse treatment outcomes. Investigating the COD population will help to gain insight into this relationship. By better understanding individual client characteristics, such as having a COD and the specific kind of COD, the treatment plan offered and the chances of relapse prevention may be improved (Beeder & Millman, 1997).

2.10 Conclusion

Many questions remain unanswered in the COD field, highlighting the need for further research into this phenomenon. Investigating this area is in the interests of helping this vulnerable population who are often misunderstood and disliked by healthcare professionals because of the complex nature of their problems (Daley & Marlatt, 1997). Better understanding this population will help clients receive the best available treatment intervention, one that is best tailored to suit their individual needs.

2.11 Research Questions

1. What is the prevalence rate of people who have a COD and who seek rehabilitation at Houghton House Addiction Recovery Centre in Johannesburg, South Africa?
2. What are the biographical details and other characteristics of the people who have a COD from this sample?
3. What are the prevalence rates of the specific substance-related disorders (abuse or dependence) and the prevalence rates of the specific co-occurring psychiatric disorders that the people with a COD presented with?
4. What are the prevalence rates of the gender of the clients who were diagnosed with specific substance-related disorders and specific co-occurring psychiatric disorders, within the group of people who had a COD?
5. Is there a significant relationship between any of substance-related disorder variables and any of the co-occurring psychiatric disorder variables that the clients were diagnosed with?