

Drug Abuse in Kenya
The Effectiveness of Heroin Rehabilitation
Centres at the Coast Province

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DRUG ABUSE IN KENYA: THE EFFECTIVENESS OF HEROIN
REHABILITATION CENTRES AT THE COAST PROVINCE.

BY

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

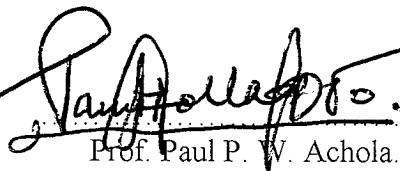


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DEDICATION

This work is dedicated to my father Mr. Suleiman Bakari Shauri and Mother Mrs. Mwanahamisi Bakari Mwajambia, who in spite of being illiterate, saw the value of education and supported me unconditionally.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
ANPH	Ankaful Psychiatric Hospital
APH	Accra Psychiatric Hospital
ANPOs	Anti-Narcotic Police Officers
CBOs	Community Based Organizations
CM	Contradiction Model
CSOs	Civil Society Organbizations
CTDCC	Cape Town Drug Counselling Centre
EMCDDA	European Monitoring Centre on Drugs and Drug Addiction
FGDs	Focus Group Discussions
GM	Goal Model
HIV	Human Immunodeficiency Virus
IHUs	Institutinalised Heroin Users
KIE	Kenya Institute of Education
MEWA	Muslim Education and Welfare Association
MHRMBs	Members of Heroin Rehabilitation Management Boards
MRRC	MEWA Rehabilitation and Resource Centre
MOs	Medical Officers
NACADA	National Agency for the Campaign Against Drug Abuse
NGOs	Non-Governmental Organizations
NIAA	National Institute on Alcohol Abuse and Alcoholism
NIDA	National Institute on Drug Abuse

NIHUs	Non-Institutionalised Heroin Users
ODCCP	Office for Drug Control and Crime Prevention
ONDCP	Office for National Drug Control Policy
PSM	Participant Satisfaction Model
PWs	Prison Warders
RCBMs	Rehabilitation Centre Board Members
RCCs	Rehabilitation Centre Counsellors
SINAM	<i>Sisi Na Maendeleo</i>
SPSS	Statistical Package for Social Sciences
SRM	System Resource Model
TIs	Total Institutions
UNDCP	United Nations Drug Control Programme
WHO	World Health Organization

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ABSTRACT

Heroin use and abuse has become a widespread social phenomenon in Kenya. Heroin rehabilitation as a mitigating mechanism has emerged with the Civil Society Organizations (CSOs) taking the lead in the provision of such services than the mandated government agency namely National Agency for the Control Against Drug Abuse (NACADA) in Coast Province. However, the existence and provision of heroin rehabilitation services by the CSOs for over a decade in the country has been occurring against a backdrop of a lack of a legislative framework. This notwithstanding, demand for heroin rehabilitation services is overwhelming and escalating as documented in this work. This study therefore sought to examine the effectiveness of heroin centres in the rehabilitation and social reintegration of users.

The main objectives of this study were three fold. First, was to identify factors that have a significant influence on the frequency of heroin use. Second, was to determine the factors that have a significant bearing on the predisposition of heroin users to seek professional help. Third, was to establish factors that account for the effectiveness of heroin rehabilitation centres.

The study was an evaluation survey design based on a sample size of 459 informants comprising 384 heroin users, 60 participants in six (6) Focus Group Discussions (FGDs) made up of members of the rehabilitation centres management boards and counsellors as well as 15 key informants drawn from police, prison and medical departments in the studied areas. To ensure a representative sample was drawn both probability and non-probability sampling techniques were used. Information on heroin users and their patterns of frequency of utilization and inclination to seek help was

obtained through Interview Schedules and was analysed quantitatively relying on the Chi-square and Logistic Regression analyses. Data from counsellors and members of the boards were obtained using FGDs while information from police, prison and medical officers was garnered through Key Informant discussions. This information was analysed qualitatively grouped by themes and presented descriptively citing participants' voices where appropriate.

The key findings are presented along three dimensions in line with the three dependent variables of the study. First, results of the study showed that informants' educational attainment, peer influence and affordability of heroin were the best predictors of the likelihood of high intensity of use. Second, informants level of income, peer influence, success of detoxification, perception of charges and counsellor-client relationships were the best predictors of the likelihood of high readiness to seek professional help. Third, frequency of attending meetings, boards supervision of staff and centres, boards-management relations, use of resources, absence of withdrawal symptoms, adequacy of drugs for detoxification and counsellor-client relationships accounted for the effectiveness of the rehabilitative work of the heroin centres. Indeed, Logistic Regression analysis which pin points the best predictor variables with respect to a dependent variable confirmed unequivocally that each of the mentioned predictor variables above were the very ones strongly linked to each of the dependent variables.

Five major problems affecting heroin rehabilitation centres emerged from the study. First, there was lack of adequate financial resources. Second, appropriate drugs for detoxification were considered illegal. Third, a dearth of professional staff was

experienced. Fourth, heroin centres had limited land for expansion services. Fifth, studied centres experienced high clients relapse rate.

Finally, a number of recommendations emanated from the key findings of the study. First, a legal framework on heroin rehabilitation centres' operations and legalizing use of heroin and methadone for anti-heroin therapy need to be put in place. Second, policies to discourage use of heroin and to enhance willingness to seek professional help should be formulated and implemented. Third, structural and organizational reforms are needed to place the operations of heroin rehabilitation centres under a single governmental body such as NACADA or the Ministry of Health. Among other duties, the government agency should be able to provide legal, financial and technical support to make heroin rehabilitation centres more effective. Fourth, more research is needed to document other factors accounting for the effectiveness of heroin rehabilitation centres, especially those that have emerged from or not considered in this work. Fifth, change and continuity in the effectiveness of heroin rehabilitation centres needs to be studied to determine the pattern of evolution of such centres with a view of getting new insights for their improvement. Sixth, further research is recommended to provide accurate statistics of heroin users, explain their behaviours and practices as well as to cover other hard drugs such as cocaine, hashish or morphine with a view to determining whether or not a link exists between the frequency of use of these drugs and that of heroin.

CHAPTER ONE

INTRODUCTION

Background

Good health is one of the basic necessities in addition to shelter, food, education and clothing. More so, it is a basic human right, as well as, a cornerstone of economic and social development. More significantly, good health enhances the productive capacity of a society and its social, economic, political and scientific institutions. In fact, good health helps reduce poverty by mitigating its effects on education, population and agriculture (Mwabu et al 1995, Republic of Kenya 1997; Shauri, 2000).

Today, the industrialized countries have improved the health status of their citizens by eradicating most infectious and easily manageable diseases (i.e. polio and small pox). But one problem that they have failed to handle is how to manage alcohol and drug abuse. Such problems are spreading to the developing countries that still suffer from infectious and communicable diseases.

Over the last two decades, there is no greater challenge that confronts the United Nations in its effort to promote good health for all than the plight of drug addicts. Faced with this reality, the United Nations General Assembly held a special session on drugs in 1998 and established targets and deadlines to substantially reduce the world's drug problem by the year 2008 (ODCCP. 2000). More importantly, this marked the realization of the fact that drug abuse and its consequent addiction has become a global menace and thus efforts to deal with the problems should transcend national borders.

The demand and supply of illicit drugs has continued to escalate. For instance in 1980-81 only 120 countries and territories reported illicit drug seizures worldwide. By 1987-88, the

number had grown to 144 and again increased substantially to 170 in 1997-98 (ONDCP 2000:33). Thus in almost two decades the number of countries increased by about 42%, which is a very high figure on a very dangerous health problem. Of these countries three-quarters reported abuse of heroin and two-thirds abuse of cocaine (ODCCP 2000).

In a related study, the United Nations Drug Control Programme (UNDCP) estimates that in the late 1990s, there were 144 million people taking cannabis and 29 million taking amphetamine type stimulants. Imperatively, these are the drugs that users start with before graduating to hard drugs. In addition, the report reveals that 14 million people were taking cocaine and 13.5 million taking opiates – of whom 9 million were taking heroin. Heroin is a very dangerous drug in user dependence. More so, the total number of drug users was estimated to be 180 million people, equivalent to 3% of the global population or 42% of the population aged 15 years and above (Sloboda 1988; ODCCP 2000:70). These statistics indicate that illicit drug trafficking and abuse has become a global phenomenon.

The African Continent is equally under the pressure of the drug abuse menace (ODCCP 2000). The assumption in most African countries, especially in Sub-Saharan Africa, is that illicit drug problem is minor. Such a view often reflects the fact that Africa has an incomplete picture of its drug problem. More precisely, data on illicit drug trends in the region have until now been relatively sparse and the few available are unreliable.

There is also the tendency to downplay the fact that recent economic, social and political instability throughout the continent have led to the emergence of needs that are clearly not met in the context of indigenous communities (Sloboda 1988, Mbatia 1996, Collins et al 1994). Imperatively, African Countries have ignored the fact that heroin and cocaine are the most critical illicit drugs. The latter is true in terms of treatment demands, hospitalization, overdose,

and viral infections such as Hepatitis and HIV/AIDS through needle sharing. These drugs have also increased incidences of organized crime, family breakdowns and other drug related violence, including violence against the state (WHO 1995, UNDCP 1998, EMCDDA 1999).

In Kenya, for instance, the problem of drug abuse has received little attention. Indeed, from time immemorial, Kenyans have been consuming intoxicants and other drugs. Alcohol is the most common form of intoxicant (NACADA 2002:23). Alcohol beverages are manufactured from various ingredients like Millet, Bananas, Honey, Sorghum, Maize cobs, Hops, and various fruits. These ingredients are utilized in the making of various brands, known by different names in different communities. It is important to note that the consumption of drugs, in many African Communities, was done within the cultural context of these communities (Donde 1984, Haji 1985, Ogolla 1993).

Accordingly, most of the Kenyan communities had values and rules that vividly stipulated when, where and under what circumstance drugs could be consumed. Nevertheless, while the potential of drug abuse existed in this context, the existence of drug abuse as a social problem was minimal due to strong social cohesion and control, which acted as mitigating mechanisms (Mwenesi 1995, Wanjiru 1979, Wainaina 1981). Apparently, in contemporary Kenyan Communities, like their counterparts elsewhere in Africa, social cohesion and controls have most likely been weakened. The colonial experience has transformed the way the communities were organized by introducing foreign values that had a strong emphasis on individuality at the expense of collectivity. As a result, the power to control and hold the community members together has probably been eroded. Consequently, the Kenyan community social control and protective functions over its members against anti-social behavior and

activities have become ineffective. The Kenyan family unit has been undermined and the school, workplace, and religious bodies have taken over most of its key functions.

At another level, colonialism also brought about urbanization and the production of large amounts of consumer goods. This has exposed many urban dwellers to legalized widespread use of a wide range of drugs for treatment and leisure. In fact, the colonial rules stressed on commercialization and liberal use of alcohol and other drugs. This has given rise to a situation whereby drug misuse has become a social problem.

The post- colonial government never changed these practices. As a result, the number of drugs and intoxicants being abused has escalated. Apart from the traditional intoxicants, socially and culturally accepted (i.e. alcohol, tobacco and Khat), a number of new substances (such as heroin) have come to permeate the Kenyan society (ODCCP 2000, Daily Nation July 25th, 2001; Daily Nation September 18th, 2001).

In the past decade heroin abuse has spread rapidly throughout the coastal towns of Kenya, principally Malindi, Ukunda/Diani, Kilifi, Mombasa and Lamu (Susan 1995). This development has arisen because the coast of Kenya, and indeed Kenya in general, has become a progressively significant transit point for heroin destined for Europe and North America (ODCCP 2000). The strategic location of Kenya in terms of access to these countries has made it a commercial hub for drug traffickers. Thus compounding the problem of drug abuse and dependence.

Heroin has in fact become an addictive drug for an increasing number of users at the coast. This dependence has become visible resulting in attempts to rehabilitate and socially reintegrate heroin addicts. Those involved in such efforts have come to realize that heroin use results in a syndrome of psychosocial disorders and anti-social behavioural tendencies.

In spite of the above scenario, there has been little attention in tackling and studying the problem of drug abuse and addiction in Kenya. Evidently, the lack of interest in the subject can be seen in the fact that the first documentation of drug abuse and addiction in the country was done in 1965 in a study by Eddy. But it was not until the year 2001 when the drug abuse and addiction phenomenon began to attract some attention. The formation of the National Agency for the Campaign Against Drug Abuse (NACADA) on March 27th, 2001 signifies this effort (Kenya gazette May 4th, 2001, Standard August 24th, 2001). The Gazette Notice No. 2841 mandated this organization in its one-year contract to initiate a public education campaign against drug abuse and addiction in the country. It was also to develop an action plan aimed at curbing drug abuse and addiction by the youth, both in and outside schools and colleges. In addition, it was to sensitize parents on drug abuse, addiction and their function as role models and initiate rehabilitation programs for drug dependent persons. This organization was, however, not effective in its contract period because there were delays in implementation leading to a renewal of its contract for more years. This has made NACADA to be still at its take off stage.

Nevertheless, at the moment rehabilitation efforts and accompanying centres are the initiative of the Non-Governmental Organizations (NGOs), private individuals and Community Based Organizations (CBOs), but their legitimacy is not well documented. Regardless of this, within the one-decade or so that these corrective efforts in favour of heroin addicts have been in operation no evaluation study (either formative or summative) has been undertaken. Time seemed appropriate for such a study.

Statement of the Problem:

Despite the generalization about the lack of legitimacy in the establishment and operations of rehabilitation centres in Kenya, no formative or substantive studies have been done

to evaluate these efforts. Thus it is not clear whether the problem of legitimacy inhibits the performance of certain heroin rehabilitation centres in facilitating the recovery and social reintegration of the heroin addicts more than others.

Legal deficiencies notwithstanding, Non-governmental Organizations, Community Based Organizations and private individuals are channeling resources at the Coast to rehabilitate heroin users. It is therefore important to find out the predisposition of the heroin users to seek professional help and the social conditions leading to heroin abuse. The latter is based on the understanding that drug abuse and its consequent addiction is a symptom of psychosocial factors. It is therefore essential to understand these factors for successful rehabilitation. This is because should the rehabilitation process not be successful in facilitating recovery and social reintegration of the addicts into the community, economic resources invested are not effectively utilized.

At another level, heroin use and its attendant addiction impact negatively on the users. Evidently, it leads to loss in economic productivity, presence of deviant groups and poor health of the users making the United Nations goal of 'good health for all' a mirage (WHO 1995, Mwenesi 1998). On the other hand, in addition to a reduction in poor health, deviancy and an increase in economic productivity, treatment may give other addicts hope of recovery and persons close to the addicts some respite. The serious medical emergencies that usually result from both intoxication and detoxification or other withdrawal symptoms call for treatment facilities. Successful treatment may also convince other heroin users to accept entry into rehabilitation centres. What is not known is how effective the heroin rehabilitation centres are in facilitating the recovery and social reintegration of the addicts?

Finally, the traditional approach of treating drug addicts as criminals or mentally ill patients by putting them in prisons, hospitals and psychiatric units amounts to a violation of their fundamental human rights. More so, prison conditions may in fact reinforce the factors that give rise to drug abuse (Mwenesi 1995). It is against these backdrops that one may want to know whether the heroin rehabilitation centres are a viable alternative to the addicts. Knowledge of the viability and effectiveness (or lack of it) of the heroin rehabilitation centres in facilitating the recovery and social reintegration of those already addicted to heroin is a prerequisite for successful interventions.

Purpose of the Study

The main purpose of the study was to assess the operations of heroin rehabilitation centres in normalizing and socially reintegrating addicts as productive members of the community. In this respect, there was a central interest in finding out the extent to which rehabilitation programmes pay attention to the causes and correlates of heroin abuse and its attendant addiction.

Objectives of the Study:

The study seeks to:

1. Identify the factors that influence the frequency of heroin use at the Coast Province of Kenya.
2. Determine the factors that influence the predisposition of heroin abusers to seek professional help at the centres.
3. Establish factors that account for the effectiveness of some of the heroin centres in facilitating rehabilitation and social reintegration of the users.
4. Find out the perceptions of prison authorities, police, management board members of these centres and medical personnel regarding the effectiveness of the heroin rehabilitation centres.

5. Propose effective policy measures and strategies to strengthen the rehabilitation of heroin abusers.

Research Questions:

The study attempts to answer the following question:

1. Why do some users' consume more heroin than others?
2. Why do some heroin users readily seek professional help and others avoid seeking such help?
3. What viable alternatives do rehabilitation centres provide to heroin users?
4. What amount of resources, caliber of professionals, counseling advice and type of environments exist in rehabilitation centres?
5. Is ineffectiveness of some of the centres related to provision of inappropriate drugs, a dearth of trained staff and poor rehabilitation strategies?
6. What views do various authorities (i.e. medical, police, prison and centres management boards) associated with rehabilitation centres and rehabilitation activities have about the available rehabilitation programmes?

Significance of the study:

There are six respects in which this study was important. First, it provides a database for understanding the operations of heroin rehabilitation centres at the Coast Province. The research, therefore, fills this gap in knowledge.

Secondly, the study findings are useful to the community-based organizations, Non-governmental Organizations, United Nations Drug Control Programme (UNDCP), private individuals and the Kenyan policy makers. For the CBOs, NGOs and private individuals the study makes it possible for them to evaluate their operations and effectiveness of their rehabilitation centres. Because these were new institutions understanding their success (or

failure) was vital for revitalizing their programmes where necessary. At the same time, the UNDCP and policy makers have a database they can use to formulate future policies and “best use practices” in respect of drug abuse and addiction.

Thirdly, Kenya like any other new state has meager resources to meet the basic needs of the citizens. The country stands to suffer further decline in resources when its most productive population become the victims of drug abuse. The situation is likely to be worse given the fact that there is a steady increase in heroin abuse and addiction in Kenya, especially at the Coast (Susan 1995, Mwenesi 1995). This study was therefore timely for suggestion of specific strategies to alleviate the heroin abuse and addiction menace.

In addition, some efforts are already being made to rehabilitate those already addicted to drugs in terms of rehabilitation centres. This is so at the coast regarding heroin addicts. Hence there is need to know how well these centres are responding to the problem of drug abuse and addiction. More so, there is need to understand the theoretical factors influencing the addicts’ predisposition to seek professional help. Such knowledge should ensure efficient utilization of resources in the war against this menace.

Since this study is an evaluation research regarding the performance of social programmes, it will add some insights to the existing literature in this field of academic discourse. More precisely, the study will document how some of these institutions work, their philosophical and operational assumptions and their effectiveness in facilitating recovery and social reintegration of the addicts. Instructively, this may form the basis for replication by other researchers in similar or other contexts.

Finally, the study utilizes both quantitative and qualitative methodologies as complementary approaches. Such hybrid use of methodologies to the study of social issues is

only beginning to emerge among researchers investigating social problems. The study therefore should make a useful contribution to methodological particularism in the investigation of social phenomena.

Scope and Limitations of the study:

This study covered five out of seven Coastal districts namely Mombasa, Kwale, Kilifi, Lamu and Malindi. The study also targeted heroin users who are adults. In this respect, the study had several limitations. To begin with, the study covered only one province thus compromising the generalizability of the results to the whole country.

Secondly, the study targeted heroin users who are adults. It excluded minors and yet these are among drug abusers including heroin.

Thirdly, this was a survey study and therefore investigated the issues related to heroin abuse at one particular point in time. It was thus not a longitudinal or time series study that would capture trends in heroin related behaviour over time. Nonetheless, the study offers useful insights into the workings of heroin rehabilitation centres.

Finally, due to time and resource constraints the study excluded the use of other research designs such as experimental, participant observation and clinical approaches.

Organization of the Thesis

This study is organised into seven chapters. Chapter One is an introductory chapter, which provides the background to the study, statement of the problem, objectives, research questions, significance and scope and limitations of the study.

In Chapter Two of this work, relevant empirical literature showing global, African and Kenyan trends in drug abuse are presented. The chapter also highlights relevant theories. The theoretical positions considered in the analysis of effectiveness of heroin rehabilitation centres

are Systems Resource Model (SRM), the Goal Model (GM) and the Participants Satisfaction Model (PSM). More precisely, the study synthesised these models to provide insights to the emerging trend in organizational effectiveness analysis, namely the *Contradiction Model (CM)*. Other theories used in combination with the models include Systems Theory, Situational Analysis, Interactionist Perspective and the Demand and Supply Theory. The chapter further provides theoretical elaboration through two conceptual frameworks.

In Chapter Three, the study provides detailed account of the research design, approaches to sampling, data collection and analysis. Chapter Four of the study examines background information concerning drug use, including heroin among the informants. The characteristics and history of drug use of the informants are given. The chapter also provides univariate analysis of the key variables of the study with a view of establishing variations for further analysis.

Chapter Five presents quantitative research findings regarding the pattern of frequency of heroin use and predisposition to seek professional help. The chapter makes use of both bivariate and multivariate analyses by using Chi-square and logistic regression analyses respectively to achieve this end. In Chapter Six, the study deals with qualitative research findings of the indicators of effectiveness of heroin rehabilitation centres as viewed by various stakeholders. The chapter also details some of the key problems facing heroin rehabilitation centres in the study sites.

Chapter Seven presents summaries of the major findings of the study, draws conclusions and implications for theory and practice. The chapter further outlines recommendations for policy and for further research. It is important to note at this point that the next chapter is devoted to the review of relevant literature.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The objective of this chapter is to review the available literature on the effectiveness of heroin rehabilitation centres as formal organizations. The chapter is an attempt to broaden our theoretical understanding of the effectiveness of the studied heroin rehabilitation centres in facilitating rehabilitation and social reintegration of heroin users as useful members of the society. The chapter takes the following format: -

- A: A global overview of heroin abuse and addiction.
- B: Rehabilitation of heroin users.
- C: Heroin rehabilitation centres as formal organizations.
- D: Assessment of effectiveness of heroin rehabilitation centres as formal organizations.
- E: Theoretical and conceptual frameworks pertinent to this study.

A: Global Overview of Heroin Use and Addiction

The subject of drug abuse and addiction, the world over, has been the center of concern in many countries in the last two decades. There is a wide range of literature covering drug abuse and addiction, especially its effect on social, economic and political development. These studies have been carried out among drug abusers mostly in the developed nations (Glatt 1969, Beckman 1988, WHO 1993, NIDA and NIAA 1998, Uhl 1998, ODCCP 2000).

In Africa there is some scanty literature that focuses on drug abuse and addiction. Even in the few studies that have been done there are considerable divergences in definitions used, time as well as place of the studies in question (Ochino 1990, Thurairara 1981, Yambo et al 1983, Acuda et al 1979, Dhalphale et al 1981, Elmi 1992 and Donde 1984). For example, more

divergences are also seen in the general population versus surveys targeting specific groups for instance, in terms of age, profession or special settings. There are also variations in terms of periodization of either annual or monthly prevalence rates, frequent use, problematic use or registered use. More significantly, no studies have focused exclusively on heroin abuse and addiction. The study therefore attempted to study the factors influencing the frequency of heroin use, as well as those affecting heroin users' predisposition to seek professional help. The study also focused on the effectiveness of the heroin rehabilitation centres in facilitating the rehabilitation and social reintegration of the heroin users in the society.

According to the Home Office (1999), drug-using behaviour that is strongly stigmatized such as heroin abuse is marginally covered by household surveys. Indeed, household surveys may represent only about 30% of studies on the use of opiates (heroin, opium and morphine) and 60% on the use of cocaine (NIDA and NIAA 1998). Importantly, these are problem drugs in that opiates and cocaine users are usually responsible not only for the bulk of overall consumption, but also for the main drug related social problems including crime, violence, drug related morbidity and mortality.

Furthermore, heroin abuse and addiction is on the increase. While the extent and characteristics of the problem obviously differ from country to country, heroin abuse trends show some signs of convergence over the last two decades (Uhl 1998). Instructively, according to replies to UNDCP's annual report questionnaires, at least 134 countries and territories were faced with drug abuse problem in the 1990s. Of these countries three-quarters reported abuse of heroin (ODCCP, 2000:4).

Elsewhere, authorities in Pakistan estimated that there could be some 1.5 million-heroin addicts within its borders, while there were believed to be half a million-heroin addicts in Iran.

In the whole of Western Europe, there were some 1.2 million-heroin addicts and about one million were reported in the United States of America (USA). It is also interesting to note here that throughout the 1990s more countries reported an increase in heroin abuse than in cocaine – which conforms to the production trends of opium and Coca leaf. Abuse trends data for the opiates (heroin, morphine, and opium) for the late 1990s reveal an increasing abuse problem in drug transit countries, Kenya included (ONDCP, 2000:63).

Moreover, the largest market for opiates in Eastern Europe was the Russian. Russian authorities estimated some 3 million-drug abusers, of which at least a third were addicted to opiates (see UNDCP, 1998). There was also a general increase in the number of opiate abusers in North America in the 1990s – most of this was heroin related. Estimates provided by the USA authorities suggest that there may have been almost one million hardcore heroin addicts in the late 1990s (ONDCP, 2000).

In China, heroin abuse and addiction is also on the increase. More precisely, Official reports document that there has been a rise of addiction to opiates since the 1990s. The rise has been strong from 250,000 registered users in 1993/94 to some 600,000 registered users in 1998/99 and its possible that the actual number could be larger. More importantly, some 80% of the opiate abuse in China is already linked to heroin (ONDCP 2000:79)

Calculations for countries in Western Europe on the levels of problem drug use for the USA show that despite a strong fall in drug use in the past 15 years, “*problem drug use*” is still more serious phenomenon. Indeed, there were some 21 “hardcore” users per 1000 inhabitants aged 15 – 64 years of heroin and cocaine in the USA in 1998. In Western Europe estimates indicate that problem drug use for the same age bracket affects only 4.5 persons per 1000 inhabitants. Elsewhere, the estimates of problem drug use per 1000 population ranged from an

average 2 – 3 in Finland, Sweden, Germany and Austria, to levels of around 4 in France, 5 in Spain and 6 – 7 in the United Kingdom, Switzerland, Italy and Luxembourg (EMCDDA 1999).

The scenario of heroin abuse and addiction worldwide looks very bleak when we examine heroin seizure data. Evidently, the average annual growth in heroin seizures amounted to 25% per annum in the 1980s (ONDCP, 2000), while seizures of heroin and morphine combined almost tripled to 54.8% tones per annum in 1997/98. The volume of heroin trafficked internationally in 1998 alone was 435 tones (ONDCP 2000). About 70% of all seizures of heroin and morphine were made in Asia. In Europe the figures stood at 23% and America 4%. Despite a proliferation of trafficking routes for opiates from Afghanistan, more than half of world heroin and morphine seizures in 1997/98 were made in South East Asia, notably in the Islamic republic of Iran. Manifestly, its share of global seizures rose from 9% in 1987/88 to 42% in 1997/98 (Allensworth et al 1998). In 1999, seizures of heroin in Iran more than doubled the 1997/98 figures, while overall heroin and morphine seizures grew by a quarter in the same period.

Europe accounted for 23% of all opiate seizures in 1997/98. Most of this took place in Western Europe, with Turkey registering about 20% of the global total (Schweinhart et al 1998). Within the European Union, seizures in the United Kingdom increased by more than 80% in 1999. This is very significant because the United Kingdom already accounted for almost a third of all heroin and morphine seizures of the European Union in 1997/98, more than the Netherlands and Germany combined (Uhl 1998).

These statistics clearly demonstrate that heroin abuse and addiction has become a global phenomenon. The literature also signals the fact that Africa has an incomplete picture of its drug problem, especially heroin abuse and addiction. This position is further confirmed by ONDCP

(2000) when it observes that much research on drug abuse and addiction has been conducted in the developed or industrialized countries as they have more resources to devote to drug abuse research than developing nations. As a result, there is lack of data on the extent of drug abuse, especially heroin abuse and addiction in Africa. The existing information in form of seizure statistics is not adequate. Seizure statistics while the most widely gathered type of drug control data has limitations in terms of serving as an indicator of the extent of the drug problem. In fact, seizure statistics can give a misleading picture of drug trends as such statistics are influenced as much by the availability of resources devoted to drug surveillance as by the true extent of drug trafficking and consumption.

At another level, the association of heroin trafficking with foreign nationals is widespread in most of the African Countries, Kenya included (Daily Nation Wednesday July 25, 2001, Standard August 29, 2001). While this reflects one important aspect of trafficking and drug abuse, there is a risk that problems of increasing involvement among the indigenous communities within each country may be overlooked.

In East Africa, Kenya has progressively become a potential country where heroin abuse and addiction has been on the increase in the last two decades. The latter scenario is explained by the fact that Kenya is a significant transit point for heroin and other illicit drugs destined for Europe and N. America. As Mwenesi observes “the spillover effect of these drugs becomes a consumer driven phenomenon” (1998:67).

A rapid assessment survey done in 1995 for the UNDCP indicated that drug abuse problem in Kenya was greater than expected and had permeated all the strata of the Kenyan society. More precisely, about a third of the 67 secondary school teachers interviewed reported that drug abuse was a problem in their schools. Of the 50 health workers interviewed, 98%

expressed the view that illicit drug abuse would increase in the near future. The drugs cited as a problem included diazepam, heroin and cannabis (ODCCP 2000:34). Furthermore, all the 32 community leaders interviewed in Kenya felt that illicit drug use was a problem in their communities.

More significantly, in the 1990-2000 decade heroin abuse and addiction has spread very rapidly throughout the Coastal towns of Eastern Kenya, principally, Malindi, Ukunda and Mombasa (Susan 1995). According to Muslim Education and Welfare Association (MEWA) in Fausia (2001), there are over 4000 heroin addicts in the Coastal region, and over 700 users are recruited to heroin abuse every year. In fact, the figures at the Coast Province are put at 6000 users addicted to the drug by the chairman of the MEWA Health Board (Standard, Tuesday, August 24, 2001).

Thus far, the literature reviewed reveals that there has been very little effort to study the problem of drug abuse and addiction in Africa, including Kenya. In view of this it was necessary to conduct a study to identify the factors influencing frequency of heroin abuse as well as those factors affecting heroin users' predisposition to seek professional help. The effectiveness of the heroin rehabilitation centres in facilitating recovery and social reintegration of heroin users was also examined.

B: Rehabilitation of Heroin Users

Rehabilitation is the process of recovering those capacities that have been diminished due to illness or injury (Abdool et al 1998, Oxford dictionary 1995). While they don't say so, the capacity lost due to drug addiction can be restored through rehabilitation. This recovery can only be sustained if the addict does not relapse or return to substance abuse. Thus, the proof of successful rehabilitation is in relapse cessation. However, rehabilitation should be more than simply abstaining from substance use. The goal should be to help the addicts to reintegrate into their community as productive and valued actors.

Accordingly, rehabilitation is not a simple process, but a very complex procedure aimed at restoring the capacities of the drug abuser. According to Abdool et al (1998:55) the various methods and contexts for rehabilitation such as detoxification, individual, group and family counseling, self-help groups and vocational rehabilitation-are vehicles for the rehabilitation journey. Abdool et al (1998) use an analogy by observing that in the rehabilitation of drug users, the client is not a passive passenger in the rehabilitation vehicle. With the help of the counsellor, he is now back in the driver's seat on the new journey along his life path. The counsellor acts as a guide and shows the route and/or can even act as a mechanic to ensure that the vehicle is properly maintained.

However, the analogy does not tell us anything about the quality of the counsellors, nor the counsellor-client or client-counsellor relationships. From this model we also emphasize that the vehicles of therapy and the support of the counsellor/mechanic are essential, but the recovering person can only progress when certain factors are considered in the rehabilitation process. Notably, from the literature reviewed no study has focused on factors that pertain to

heroin user's demographic and socio-economic background, their environmental conditions or rehabilitation centres specific factors.

It should also be noted that rehabilitation process begins when the drug user comes out of detoxification¹ program. Counselling aimed at making the heroin user abstain from the drug follows this program. Moreover, abstinence in itself is not enough if the heroin users do not see the benefit of remaining drug free for they will relapse sooner or later.

To achieve complete recovery, heroin dependent persons have to develop the ability to honestly criticize themselves, their attitudes and behaviour. They should also acknowledge the fact that they have lost control over their heroin using habit. In addition, they have to learn the basic facts about drug abuse, physical and psychological dependence. More so, they should accept the economic, health and psychosocial consequences of abusing drugs and should realize that the need to recovery is difficult and that they can do it but not alone (Abdool et al 1998:56).

Likewise, for most of us it is vital to have productive work in order to feel good about ourselves. This is also very true of recovering drug users. Indeed, work is an essential path towards rehabilitation (UNDCP 1998). Unemployment may lead to drug abuse, but it is equally true that drug abuse may lead to unemployment. Evidently, of the 553 drug offenders arrested in Ethiopia between 1993/1997, 50% were unemployed. In South Africa, 36% of drug users under treatment at the Cape Town Drug -Counselling Centre (CTDCC) in 1996 were unemployed. Of the total (925) drug related patients admitted to the Ankaful Psychiatric Hospital (ANPH) in 1996 in Ghana, 47% were unemployed. Similarly, 60% of the drug patients of Accra

¹*Detoxification* is a process whereby the client is helped to overcome his/or her physical and psychological withdrawal symptoms using alternative medication. The main objective of this program is to neutralize the toxic levels of heroin in the addict's body. The detoxification program ("detox") is done for 72 hours or more for heroin users (MRRC 18th May, 2001).

Psychiatric Hospital (APH) were unemployed. In Kenya, the unemployed makes up the majority of drug abusers (UNDCP 1998:73). These studies clearly show that majority of the drug users are unemployed. But they do not reveal whether or not employment status influences the frequency of heroin abuse-this underscored the need for the study.

Following the above argument, apart from the salary, employment fulfils many other rehabilitation goals. More precisely, work can provide an opportunity to make new abstinent friends. It can provide a structure for responsibility, self-esteem and respectability. Furthermore, it might be a viable solution in fighting boredom and idleness that can be triggers for drug abuse and relapse.

Closely linked to the idea of employment in rehabilitation is community service. The involvement of addicts, who are recovering in voluntary work, is actually a transitory step towards social reintegration (Mwenesi 1995, Elmi 1992, Abdool et al 1998). Such work may include small environmental protection projects; cleaning a yard, public place, planting trees, helping at community health centre, orphanages, mosques/church, painting social welfare centres or participating in drug abuse awareness campaigns. Community service if well planned and adequately explained to the recovering heroin users can help attain other rehabilitation goals. These goals may include raising the self-esteem of recovering heroin users, promote feelings of being helpful to the community and provide regular occasions for the recovering users to meet social workers and an opportunity for them to practice time management and good work habits.

There is some evidence that despite the struggle to make the heroin users productive and valued actors in society, this goal of their social reintegration is far from being achieved. For example, according to the UNDCP (1998) and Abdool et al (1998), for social reintegration to be

successful support and acceptance for the clients from the community is a prerequisite. Many rehabilitation efforts ignore this crucial point.

Whether the rehabilitation centres at the Kenyan coast have been able to tap this support and acceptance from the community remains unclear. Moreover, the various rehabilitation strategies enlisted by the centres remain uninvestigated. Thus, though heroin rehabilitation centres at the coast aim at recovering the capacities of the heroin users that have been diminished as a result of their heroin use behaviour, their effectiveness remains equivocal. This study, therefore, attempted to examine the impact of heroin rehabilitation centres and did so using the formal organizational approach.

C: Heroin Rehabilitation Centres as Formal Organizations

Despite the fact that numerous scholars have handled organizational analysis, major disagreements regarding the definition of an organization or bureaucracy have persisted. For instance, Barnard (1938:73) defines “bureaucracy as a system of consciously co-ordinated activities or forces of two or more persons”. Activities in the organization are accomplished through consciously, deliberate and purposeful co-ordination. To Etzioni (1964) and Scott (1964; 1977), organizations are social units deliberately constructed and reconstructed to seek specific goals. Selznick in Etzioni (1961) sees organizations not only as economies and adaptive structures, but also as co-operative systems. Wallis (1989:1) looks at bureaucracy as a concept suggesting a slow moving organization usually associated with government, which serves the public with a mixture of arrogance, deliberate obstruction and incompetence.

These examples clearly demonstrate that the precise meaning of the concept bureaucracy has varied depending on the approach and focus of different scholars in the field of organizational analysis. Accordingly, the present study adopts a definition of organization as

postulated by Max Weber. Weber defines formal organization as a “system” designed rationally to co-ordinate the work of many individuals in the pursuit of large-scale administrative tasks and goals. The system limits the admission of outsiders by rules enforced by the action of the organizational head (Weber 1947:145). This definition is adopted due to the fact that it is all encompassing and adequately captures the central theme of this thesis-heroin rehabilitation centre.

In the definition, Weber gives a number of elements that organizations must fulfill for them to be considered formal organizations. These requirements include, first, the regular activities done for the purposes of the organizational existence as divided into official duties. This makes each administrative office have a clearly defined area of operation and responsibility. Complex tasks are broken down into manageable parts, with each official having an area of specialization. As a result, each official in an organization has a clearly defined sphere of operation, competence and responsibility.

Secondly, the officers’ of an organization perform their duties in a spirit of formalistic impersonality. That is without hatred or passion. This is because the activities of the organization are governed by rules, and not by personal considerations like feelings towards clients or fellow bureaucrats. Indeed, the bureaucratic operations are governed by well spelt out rules. The rules clearly define the limit of authority of officers in their respective positions. The juniors’ obedience to the supervisor is thus derived from a belief in the legitimacy of the rules. More so, the rules stipulate the procedures to be followed in the performance of each role. The action of the officer is thus rational rather than affective in discharging official duties. This stipulation by Weber can be criticized on the grounds that these rules impose strict discipline and control, hence leaving little room for personal initiative or discretion in the running of the organizations

affairs. This in itself is problematic for the staff to strive to attain higher levels of efficiency and effectiveness for the organizations they work for. These are shortcomings that rehabilitation centres are likely to face in their workings as formal organizations.

Thirdly, the organization of offices follows the principle of hierarchy. That is every lower office is under the control and supervision of a higher one. The hierarchy makes the establishment of a chain of command and responsibility structure possible. More significantly, this makes each official accountable to his/her boss. Further, officers in an organization must be appointed on the basis of technical knowledge and expertise rather than elected on the basis of popularity. In Weber's own words:

Bureaucratic administration means fundamentally the exercise of control on the basis of knowledge... this is the feature, which makes bureaucracy specifically rational (Haralambos et al 1991:283).

Fourthly, formal organizations involve a separation of private and official income. For that reason, the official does not own any part of the organization for which he/she works, nor can the bureaucrat use his/her position for private gains. In Weber's own words:

Bureaucracy segregates official activity as something distinct from the spheres of private life (Weber 1947; 145).

Following the above arguments, heroin rehabilitation centres are formal organizations in the sense that the regular activities have been divided in a fixed way as official duties. The organization of offices adheres to the principle of hierarchy and officials of the heroin rehabilitation centres are appointed on the basis of their technical qualifications and competencies. These officials are governed by strict rules and control in the operation of their offices. Furthermore, the heroin rehabilitation centres were formed to facilitate the attainment of

specific goals, namely, rehabilitation and social reintegration of heroin users as productive and esteemed members of the community.

Thus, heroin rehabilitation centres are bureaucracies because they represent rationally ordered instruments (like boards) for the achievement of stated goals. The latter is in addition to the fact that they constitute an arrangement of personnel for facilitating the rehabilitation and social reintegration of the heroin users. This as revealed elsewhere in this discourse is made possible through the allocation of duties and responsibilities among the officials of rehabilitation centres in a systematic way to minimize conflict.

More so, the notion of a “system” in the Weberian definition adequately captures the heroin rehabilitation centres as formal entities. For instance, these centres are made up of various departments or units that are related to each other in facilitating the rehabilitation and social reintegration of the addicts. In this case, the operations of the heroin rehabilitation centres can be conceptualized on how these departments relate to each other in what Parsons (1960) called “functional unity”. Accordingly, the effectiveness of each unit and thus the rehabilitation centre as a whole depends on the effective functioning of each of the departments and the portfolio holders.

It is also worthy to note here that basically organizations, heroin rehabilitation centres included, are mainly studied to understand “how” and “why” these entities are effective or ineffective. Imperatively, formal organizations are investigated to understand how they can be made more effective in attaining their goals. In this respect, it’s worthy to recognize the fact that individuals will always want the organization in which they participate either directly or indirectly to perform well. In this sense, Etzioni (1964), Blau (1964), Perrow (1961) and Weber

(1947) see bureaucracies as the epitome of efficiency and effectiveness in the achievement of set goals.

These observations clearly emphasize that organizations such as heroin rehabilitation centres are created to enhance the efficiency and effectiveness in the achievement of specific goals. The heroin rehabilitation centres *inter alia* were formed to reform and reintegrate heroin users into the community. Perrow (1979) augments the view being expressed here when he observes that bureaucracy is probably the most efficient and effective form of administration, and all organizations will adopt this form to attain efficiency and effectiveness. Indeed, according to Fox (1997) organizations like the heroin rehabilitation centres are seen to create service delivery units with the incentives and authority to manage resources cost effectively, efficiently and for quality results.

The above observations, however, raise a number of questions: Does heroin rehabilitation centres improve effectiveness of rehabilitation and social reintegration of addicts into the community? Are the heroin rehabilitation centres more viable than prisons or psychiatric units in hospitals to successfully rehabilitate and socially reintegrate heroin users? If not, what are the obstacles facing these centres in implementing their programmes?

In sum, the literature reviewed shows that there is no consensus on the definition of formal organizations. Further, it reveals that formal organizations like the heroin rehabilitation centres are created to enhance efficiency and effectiveness in the achievement of specified objectives. However, whether or not the heroin rehabilitation centres have been effective remains unclear. The present study was undertaken to determine the effectiveness of heroin rehabilitation centres in rehabilitation work and social reintegration of those reformed into society as useful members.

Assessment of Effectiveness of Heroin Rehabilitation Centres as Formal Organizations

In this section we deal with a topic that is central to this work namely the effectiveness of heroin rehabilitation centres. Given the complex nature of analyzing organizational effectiveness and the idea that organizational effectiveness as a concept has inherent contradictions (Hall 1991), the present study attempted to explain the effectiveness of heroin rehabilitation centres using a combination of organizational effectiveness models.

This approach recognizes the fact that there is lack of consensus among organizational practitioners and scholars on how to analyze organizational effectiveness. Cameron (1983) quoted in Hall (1991:246) aptly captures this lack of agreement in the measurement of organizational effectiveness when he observed that:

Effectiveness is a paradox, with both consensus and conflict in various conceptions of organizational effectiveness.

More specifically, scholars like Price (1972), Zammuto (1982), Benson (1977), Gross (1968), Scott (1977), Selznic (1967), Wildavesky (1964), Jenkins (1977), Burt et al (1980) stress the attainment of organizational goals as the major indicator of assessing organizational effectiveness. In contrast, Stipak (1979), Giordano (1976; 1977) and Parsons (1960) analyze organizational effectiveness on the basis of participant satisfaction with the operations of the organization. To them participants' satisfaction boosts commitment to the organization's ideals and hence it's effectiveness.

The above-cited works demonstrate that practitioners and scholars in the field of organizational analysis agree on some aspects of organizational effectiveness and have divergent views on others. Similarly, individuals are not neutral about the organizations in which they participate as workers, clients, customers or publics. The latter brings us to the issue of relativity

in the conception of organizational effectiveness depending on an individual's position in the organization. Simply put, this work recognizes the fact that various stakeholders in any single organization can have consensual or conflicting views on its effectiveness assessment.

To deal with the problem of divergent views regarding organizational effectiveness assessment, practitioners and scholars in the field of organizational analysis have come up with various models of assessing this concept. The need to adequately understand "how" and "why" organizations are effective or ineffective in their operations has necessitated this approach. Instructively, one may want to make such organizations more or less effective from an economic, political, social or moral perspective.

To start with, Yuchtman and Seashore (1967) developed what came to be known as the **System Resource Model (SRM)** of organizational effectiveness analysis. These scholars noted that variables concerning organizational effectiveness could be arranged in a hierarchical order. At the apex of the hierarchy is some ultimate criterion that can only be assessed over time. They gave an example of such an ultimate criterion as the optimum use of opportunities and resources found in the organizational environment. According to the *Natural Selection Model (NSM)* by Charles Darwin for instance, the ultimate criterion would be survival or death.

Next are the penultimate criteria. These are relatively few in number. They include outputs or results criteria referring to things sought for their own value. To them, these things have trade off value in relation to one another and they are in turn wholly caused by partially independent sets of lesser performance variables. Their sum in some weighted mixture over time wholly determines the ultimate criterion (Yuchtman et al 1967: 378, Hall 1991:248).

The final level of the Systems Resource Model (SRM) involves the subsidiary variables. These are usually many in number and some of which would refer to sub-goals or means of

achieving goals. Additionally, others would be in terms of organizational states or processes. However, Yuchtman and Seashore (1967) believed that the ultimate criterion was not a measurable construct and decided to work with the penultimate criteria. They used these criteria to study 75 independent insurance agencies in the United States of America (USA). The results of their study revealed that penultimate criteria accounted for an overwhelming 70% of the total variation in the performance of these organizations. As a result, Yuchtman and Seashore (1967:393) postulated that:

The effectiveness of an organization should be seen in its ability
to exploit the environment in the acquisition of scarce and valued
resources to sustain its functioning.

Based on Yuchtman and Seashore (1967) model of organizational effectiveness, the study used the subsidiary variable criteria to measure the effectiveness of the heroin rehabilitation centres in facilitating the rehabilitation and social reintegration of heroin addicts to the community. More precisely, the study utilized the penultimate and subsidiary variables to analyze the effectiveness of the heroin rehabilitation centres. Some of these variables included supervision of the rehabilitation process, social reintegration, relapse rate and follow up, members' commitment, expenditure management and goal attainment.

Further, it should be noted here that the System Resource Model (SRM) as highlighted by Shauri (2000; 2001) has a number of shortcomings that need serious considerations. First, the ultimate criteria uncovered cannot be generalized to all organizations. More so, resource acquisition should be perceived as relative to the capacity of the environment in which the organization operates. In fact, the ultimate criteria used can be seen as goal(s) of the

organizations. It should be emphasized here that resource acquisition does not just occur, but is primarily dependent on what that organization is set out to achieve.

The second model of organizational effectiveness analysis is the **Goal Model (GM)**. According to Hall (1991), the Goal Model is both simple and complex. In its simplest form, effectiveness of an organization is seen in terms of the degree to which it's realizing its goals (Etzioni 1964:8). In this case, the Goal Model (GM) is most suited to exploratory studies of organizational effectiveness. This study of the effectiveness of heroin rehabilitation centres at the Coast is a case in point. The heroin rehabilitation centres have few goals that can easily be identified and studied. This makes it more efficient for the researcher to develop the criterion measures to assess how well these goals are attained.

In support of the Goal Model (GM), Etzioni (1964) postulates that organizational effectiveness is aptly understood when one looks at how well the goals of the organization are being met. That is, are the desired end states or objectives specified by the dominant coalition (Goodman and Pennings 1977) being met? Indeed, in his own words Etzioni (1964:8) observes that:

The degree to which organizations (like the heroin rehabilitation centres) realize their goals or objectives defines their effectiveness.

On the other hand, the complexity of the goal approach in organizational effectiveness analysis occurs due to the fact that most organizations have multiple and conflicting goals. More specifically, Cummings, Huber and Kochan (1977) have pointed out that structural differentiation in organizations is related to goal diversity and goal incompatibility. This makes the goal approach difficult to use in organizational effectiveness analysis, but does not of course, automatically discredit its utility in organizational analysis. For that matter, Hannan et al (1977b)

suggest that despite the shortcomings of the goal approach, it is essential and should be retained in organizational analysis. In fact, the complexity of the goal approach is in conformity with the realization that some organizations have official, operational and non-formal goals. Perrow (1961:855) aptly captures this situation in the excerpt below when he observes that:

Official goals are the general purposes of the organization as put forth in the Charter, annual reports, public statements by key executives and other authoritative pronouncements. On the other hand, operative goals designate the end sought through the actual operating policies of the organization; they tell us what the organization actually is trying to do, regardless of what the official goals say are the aims.

Scott 1977, Lawrence et al 1967 and Reiman 1975 make pretty much the same arguments. In contrast, non-formal goals are the undocumented end states within any organization that are adhered to either consciously or unconsciously in ensuring optimal production of goods and services. These goals are not stipulated in any official document, but are critical in ensuring efficiency and effectiveness in the organizational production processes. To remedy this problem of competing goals, this work incorporated both the official and operative goals of the heroin rehabilitation centres in the analysis of their effectiveness.

Barnard (1938), Georgiou (1973), Cummings (1977) and Steers (1977) developed a third model namely, the **Participant Satisfaction Model (PSM)** of organizational effectiveness analysis. This approach utilizes the individual as the major frame of reference in analyzing the effectiveness of an organization. The basic assumption of the model is not the satisfaction in terms of morale of the individual, which is a frequent component of the goal approach, but the individual or group judgment about the quality of the organization(s) they interact with.

According to Barnard (1938) in his analysis of organizations as cooperative, incentive-distributing devices, individuals contribute their activities to organizations in return for incentives. A similar argument is advanced by Blau (1964) and Samuel (1979) in the social exchange theory. In the process, the contribution of each member in pursuit of his/her particularistic ends becomes a contribution to the satisfaction of the ends of others. To be specific, Barnard (1938) regards the motives of the individual participating in an organization as the critical determinant of organizational effectiveness. In support of Barnard's (1938) view, Georgiou (1973:300) asserts that:

Only if the motives of the individual participants were satisfied, could
organizations continue to operate.

In this case, organizational effectiveness or success is not viewed in terms of goals being achieved. Organizational effectiveness arises from its capacity to survive by being able to gain enough contribution from the members on the basis of sufficient rewards or incentives in their favour. Accordingly, the study utilized this model to explain the commitment of members to the ideals of the heroin rehabilitation centres, as well as, the factors influencing the predisposition of the heroin addicts to seek rehabilitation services.

All said and done, however, PSM has its own limitations. The limitation of this model is seen in the fact that Barnard's (1938) and Georgiou (1973) did not realize that incentives are administered in the context of a specific environment. As a result of this shortcoming, Cummings (1977) using the same model approached effectiveness differently. According to him, Organizations like the heroin rehabilitation centres and their processes are instruments or arena within which participants can get involved in behaviour they deem instrumental to their own goals. In the words of Cummings (1977:59) an effective organization is one in which:

The greatest percentage of participants perceive themselves as free to use the organization and its sub-systems as instruments for their own needs.

The major weakness to Cummings (1977) approach is that he did not realize that organizations must acquire adequate resources for them to be instrumental to their participants.

In another related approach, Steers (1977) stipulates that effective organizations are those in which participants are in agreement with the goals of the organizations and work harder to achieve them. Apparently, this approach raises a number of issues. First, does Steers realize that individuals have varying forms of linkages to the organization of which they are a part? In fact, this point is well addressed by Etzioni (1961; 1975) when he revealed that peoples' involvement in organizations could be alienative, calculative or moralistic. These different forms of involvement preclude the possibility of individual and goal congruency in many types of organizations. Secondly, does Steers take into account the fact that many personnel in most organizations are not aware of the organization's official or operative goals so that the agreement can become a moot point?

The approach also downplays the reality of conflicting goals or decisions that must be made in the face of environmental pressure. For instance, Angle and Perry (1981) found a positive relationship between workers' commitment to the organization and such effectiveness indicators as adaptability, turnover and tardiness. No such relationship was found with the effectiveness indicators of operating costs and absenteeism.

Furthermore, the model misses the fact that individuals outside the organization are affected by what the organization does. Stipak (1979) for example, found little relationship between objective service delivery indicators and citizen evaluation. Similarly, Giordano (1977) found that "users" of a juvenile justice system had clearly different views on the effectiveness of

organizations such as courts, police stations and probation centres, from those held by the staff of these organizations or agencies.

To address the weaknesses inherent in the models of organizational effectiveness discussed above, the study adopted the **Contradiction Model (CM)** of organizational effectiveness analysis. This is a hybrid approach of organizational analysis that is nascent. The rationale behind its utilization in this work is the reality that organizational effectiveness as a concept contains contradictions (Hall 1991:245). The contradiction model of organizational effectiveness was adopted because it taps all the strengths inherent in the other models of effectiveness discussed above.

Instructively, a contradiction model of organizational effectiveness considers organizations to be more or less effective with regard to the goals that they pursue; the resources that they attempt to acquire, the variety of participants inside and outside the organizations and the variety of time frames within which effectiveness was judged (Heydebrand 1977, Campbell 1977, Hannan and Freeman 1977b and Kahn 1977).

In conclusion, the literature reviewed shows that there is no agreement among scholars and practitioners on the best model to analyze effectiveness of organizations. It is for this reason that this study utilized the contradiction model of organizational analysis by first; considering the heroin rehabilitation centres to be more or less effective with regard to the goals they pursue; second, the resources they attempt to acquire; the variety of participants inside and outside of the heroin rehabilitation centres and fourth, the time frames by which this study judged the effectiveness of these centres in rehabilitating and socially reintegrating the heroin addicts.

Theoretical Framework

Having discussed effectiveness assessment of formal organizations, which is a component of this work, attention now shifts to other concerns of this study namely frequency of heroin abuse and predisposition to seek professional help. These additional components are discussed within the context of several theories. The main aim in this section is to outline the major theoretical perspectives from which this work was conducted. This is in realization of the fact that any sociological analysis involves theorizing because the act of research itself necessarily involves making certain questionable propositions about the nature of social reality and how it becomes intelligible to us. The theories used in this work include social systems; interactionist; situational approach and supply and demand theories. Each of these theories is discussed sequentially in the sections that follow.

Social Systems Theory

The basic assumptions of systems theory are that organizations are composed of sets of interdependent parts with structural functional commonality; organizations have needs for survival and organizations as systems behave and take action (Parsons 1960). More significantly, organizational behaviour is directed to achieve a goal and this is what differentiates it from other social systems (Merton 1957, Perrow 1961, Weber 1947, Etzioni 1965, Blau 1964).

The major thrust of the theory is to give an explanation to what transpires in the interdependent parts of the organization. According to Smith (1989), units of an organization contribute or receive something from the whole to facilitate goal attainment. Parsons (1992:60) observes that:

A social system is not made up of the total action of concrete persons and collectivities, but only their actions in specific roles.

Accordingly, individuals in organizations like the heroin rehabilitation centres must function well in their respective roles for the effective achievement of the goals and its survival. Indeed, to Parsons (1960) the participation of an actor in a patterned interactive relationship is the most significant unit of the social system.

The impression we get from the above observations is that the social systems theory centres on organizational behaviour and the symbiotic functions of the units of an organization. These factors could be viewed as partly explaining the effectiveness of the heroin rehabilitation centres at the Coast. This is in consideration of the fact that the functions of each unit like the management board; detoxification, individual, group and vocational counselling are dependent upon the functions of the other parts for the survival of the whole. Thus, if the management board is not executing its functions properly, then the functions of detoxification, counselling and indeed the whole will be hampered.

Similarly, if any portfolio holder among the heroin rehabilitation centre staff is not carrying out his/her roles effectively, then the other members and the rehabilitation centre(s) will be rendered ineffective in its operation leading to poor goal(s) attainment. Simply put, when the social systems equilibrium among the various units comprising the heroin rehabilitation centres are not maintained, some measure of conflict is bound to occur and the centres are likely to be rendered ineffective.

The major issues that this theory addresses in relation to organizational effectiveness, therefore, include what the organization like the heroin rehabilitation centre do for the society of which they are a part, goal attainment efforts, adaptation to change, integration and potency (Parsons 1960:182).

Following this line of argument, we can deduce that the heroin rehabilitation centres have established social networks among the various positions, roles and units for the attainment of their goal(s). The matrix of interrelationships formed has enhanced the stability, continuity and probably goal attainment(s) in these centres. However, when the social equilibrium among the various departments of the heroin rehabilitation centres is violated, conflict is likely to emerge rendering them ineffective in the rehabilitation and social reintegration of heroin addicts as productive and valued actors of the society.

Interactionist Theory in Understanding Heroin Users and Rehabilitation centres

Goffman (1968) conducted the first major study of organizations from an interactionist perspective in a mental hospital in the Washington D.C Metropolis. The study later widened to include organizations that share certain characteristics with mental hospitals. They include prisons, concentration camps, orphanages, monasteries, rehabilitation centres and army barracks. Goffman (1968) labeled these organizations as Total Institutions (TI)².

Each individual in a TI is considered as a case of a natural experiment on what can be done to the self. For this purpose, the individual name, appearance and even possessions are confiscated to facilitate this end. These actions say something to the inmates. Specifically they state that when an individual enters a total institution, he/she is no longer the same person. However, the self is then slowly molded, partly by means of rewards and partly by punishments. Accordingly, the actions of the inmates can only be understood with reference to the mortification of the self that occurs in these facilities.

²*Total Institution* is a place of residence and work where a large number of like situated individuals cut off from the wider society and together lead an enforced, formally administered round of life (Haralambos et al 1991:316). They are actually reformatory residence forcing houses for changing persons or putting people in solitary confinement.

In the social systems theory, organizations like heroin rehabilitation centres are viewed as systems and the behaviour of their members as response to the needs of the systems (Weber 1947, Perrow 1961, Etzioni 1965, Merton 1957, and Blau 1964). Following this theory, members of an Organization are constrained to act in a particular way and have little say in the direction of organizational activities. That is the organization rather than its members are seen to control organizational behaviour.

Antithetically, the interactionist theory asserts that external forces do not determine action. Instead, it is directed by the meanings that define social reality. For instance, a range of meanings may be attached to an order issued by the board(s) governing the operations of the heroin rehabilitation centre(s). The order may be considered as reasonable or unreasonable. The members of staff may regard obedience as demeaning or involving no loss of self-respect. As a result of the meaning given to the order, it may be obeyed willingly or unwillingly; it may be ignored or flatly refused, hence impacting on the effectiveness of the centres.

According to this theory, to understand actions of the staff members and even the inmates of a heroin rehabilitation centre, it is necessary to discover the meaning that direct the action. Indeed, from the interactionist perspective a force external to the actor does not determine meanings. They are created, modified and changed by actors in interaction situations. Thus, in order to understand actions, we as sociologists must examine the process of interaction and interpret the meanings that develop within it and which guides and directs the action. For that reason, this study tried to understand the actions of the members of the heroin rehabilitation centres in facilitating rehabilitation and social reintegration of the heroin users within this context.

Social systems theory is useful in this work in that it defines the broader context within which behaviour occurs. More precisely, it provides the rules and the norms within which behaviour takes place and thus directs it. Additionally, the interactionist theory sensitizes us to the fact that while behaviour is defined by the context within which it occurs, the actors involved define the meaning attached to the behaviour.

Notably, the study also realizes the fact that not all inmates in a Total Institution will respond the same way to the rehabilitation and social reintegration programmes. To capture the variations in responses the study adopted the modes of adaptation of inmates of Total Institutions as postulated by Goffman (1968). Imperatively, the latter gave insights into the interpretation of the factors affecting the predisposition of heroin users to seek professional help. The modes of adaptation include, firstly, the *situational withdrawal*³. Secondly, we have the *intransigent line*⁴. Thirdly, is *colonization*⁵. We have also the *conversion*⁶ mode of response and finally, *playing it cool*⁷. Whether or not users of heroin rehabilitation centres adopt these strategies has remained unexplored/examined thus underscoring the need for this type of study.

³ *Situational Withdrawal* is a condition where an inmate withdraws attention from everything, save events immediately surrounding his/her body and minimizes interaction with others or staff. In mental hospitals this is called "*regression*".

⁴ *Intransigent line* refers to a situation where the inmate flatly refuses to cooperate with the staff and exhibits sustained hostility towards the institution. When this happens in military barracks the inmate is locked in the stockade; in prison he/she may be placed in solitary confinement and in mental hospitals he/she may be isolated from other patients, given electric shock or even a lobotomy (an operation involving the removal of part of the brain, especially as a way of treating severe mental disorders)

⁵ *Colonization* refers to a situation where the inmate becomes institutionalized. The client finds a home from home and defines life in the institution as more desirable than life in the outside. Such inmates make concerted efforts to remain inside as their day of release approaches.

⁶ *Conversion* is a situation where the individual adopts the staff definition of the model inmate and acts out the role.

⁷ *Playing it cool* is a strategy for inmates to stay out of trouble. By playing it cool, the inmate will have a maximum chance in the particular circumstance of eventually getting out of the Total Institution physically and psychologically undamaged.

Thus far, both the systems and the interactionist theories were handy in providing useful interpretations of the effectiveness of the actions of the heroin rehabilitation centres staff in their interaction with the inmates. Indeed, the systems theory provided the organizational framework within which behaviour took place in respect to the goals of the rehabilitation centres, while the interactionist theory provided the framework for understanding interactions on the basis of the meanings attached to actions. Furthermore, the various modes of adaptation to life in Total Institutions were quite useful in interpreting the behaviour of the heroin addicts in seeking professional help.

Situational Theory in Understanding Heroin Users and Rehabilitation Centres

The leading proponents of situational approach theory are Thomas and Znaniecki (1974). The major thrust of the theory takes three dimensions namely, the definition of the situation; the idea of crisis; and the concept of social disorganization that brings about redefinition of the situation.

More specifically, the situational approach theory looks at human behaviour as being determined by situations directed by biological, psychological, socio-economic and cultural factors. From the situational approach, the situation an individual faces is comprised of the objective and subjective facts. Objective facts are common to the observer and the individual alike, while the subjective ones are facts that exist to the self. That is, they are facts as they are perceived and experienced by the individual as opposed to the objective facts that may actually exist in reality.

Following the subjective line of argument, an individual heroin user can define a situation (i.e. himself, other objects, actions and characteristics) from his/her subjective position. A process of thinking, in which possible causes of action are examined and assessed follows this

definition of the situation and consequently one of them is selected based on its relatively high value.

As alluded to above, the subjective facts are relative. Regardless of this point, to the heroin user the facts perceived or experienced are real. For instance, some heroin users probably do not want to join the available rehabilitation centres. The reason for this decision may be based on a feeling that such institutions are ill equipped to handle their withdrawal symptoms. This subjective reality has probably made such users not to seek professional help and hence opted to continue with their heroin addiction behaviour. However, according to the theory such subjective facts cannot be dismissed as mere beliefs or attitudes, for the heroin user these facts are very real and sensible.

Thus, how individuals perceive themselves, other objects, actions and characteristics are the key to human behaviour and adaptation to any given situation. In this study, whatever may be the content of heroin abuse intervention strategies by the heroin rehabilitation centres, the vital feature is not the objective perception of the quality of rehabilitation and social reintegration programmes as seen by the staff, but the heroin users' definition of such issues or situations.

The social recognition of the quality of services refers to how the inmates perceive the rehabilitation services offered and the ramifications accompanying such perceptions. These lay perceptions of the quality of the rehabilitation services and social reintegration programmes are the crucial instruments in the assessment of the effectiveness of these centres. Their understanding may also boost the heroin users' predisposition to seek professional help.

Further, Thomas and Znaniecki (1974) postulated that human behaviour occurs under certain specific conditions. They observed that when individuals act as anticipated in primary group organizations, then there is nothing to worry about. However, the redefinition of a

situation becomes a necessity when new influences appear to destabilize the existing habits or when new stimuli demand affection or when a group is unprepared for an experience such as poverty, corruption, increasing rates of infectious diseases, crime, drug abuse and addiction. In all these cases there is a “Crisis” which is viewed as a threat that calls for a new approach namely a redefinition of the situation.

According to the proponents of the theory, a “crisis” is depicted as the most vital of human experiences. This is because it affects the actions of individuals and group behaviour, in addition to influencing the context of culture, personality and the direction of socio-cultural change. Thus, any crisis results into some social disorganization. The latter calls for social reengineering to ensure proper direction to the future course of events.

Social action or behaviour is therefore situationally determined by new experiences that call for redefinition of a situation. However, the proponents postulate that the redefinition of the situation depends on cultural factors, which either independently or collectively enhance subsequent behaviour whether in the socio-economic, biological, and psychological domains.

Accordingly, the physical environment, the social values, norms and attitudes of people one interacts with and most significantly the individual’s perception of the situation, its meaning and definition, have a bearing on the next approach to the situation. These factors could thus be viewed as partially explaining the involvement of people in heroin abuse and addiction behaviour. This is in realization of the fact that coping with modern day life realities in most developing nations constitutes a kind of a “crisis” which necessitates some kind of a response.

Accordingly, the issues that need to be considered at this point are the influence of socio-economic conditions on heroin abuse. The extent to which perceived quality of services and heroin users background characteristics determine their predisposition to seek professional help;

and the views of the rehabilitation officials, senior police, prison and medical officers regarding their attitudes towards heroin inmates and the effectiveness of the heroin rehabilitation centres.

The situational approach theory therefore is likely to provide explanations to the above factors. This is due to the fact that it views human behaviour as adjustable and human beings as continuously attempting to come to terms with situations in which they find themselves. In this case, the heroin users may be seen as trying to come to terms with the socio-psychological crisis of modern life in their own ways. Some of such crises may include costs of basic needs, unemployment, diseases, poverty, ignorance, poor housing, low wages, and pressure to meet subsistence needs. These pressures could explain the involvement of people in heroin abuse and addiction behaviour as a coping mechanism.

Supply and Demand Theory in Understanding Heroin Users and Rehabilitation Centres

The study was also viewed within the context of supply and demand theory. The assumption in this theory is that price is determined by the forces of supply and demand and that supply and demand are influenced by several other factors such as consumer tastes and values.

Supply means the provision or the availability of something that is needed or useful. Simply put, it is the quantity the suppliers are willing to take to the market at different prices, while demand is the quantity consumers are willing and able to purchase at different price levels. Demand is affected by various factors such as the price of the commodity, income of the consumer, tastes and preferences of the consumer.

This study considers the factors affecting heroin abuse among the users as an issue of supply and demand. The supply factors deal with the availability of heroin. Apparently, availability of heroin is not elastic since it is not a legal drug. In this study, inelasticity is viewed in terms of supply reduction that is the major responsibility of the government through law

enforcement agencies. The need for the law enforcement agencies in the supply reduction strategy in many governments is in realization of the fact that drug trafficking is a discreet, premeditated and well-executed operation by people with immense financial and human resources.

From a criminological perspective, it may be noted that supply of narcotic drug is a primary activity of organized crime. It is due to this that the Kenyan government has enacted legislations such as the Dangerous Drug Act Chapter 245 of the Laws of Kenya, which has recently been replaced by the Narcotic Drug and Psychotropic Substances Control Act 1994. In order to enforce this and related laws an anti-narcotic unit within the police administration was set up by the government.

This study made use of the demand reduction strategy in understanding and interpreting the effectiveness of the heroin rehabilitation centres in minimizing demand for this substance by their rehabilitated clients. Thus, in this study, heroin rehabilitation centres are perceived as establishments formed to enhance demand reduction of heroin. Imperatively, basic economics states that where there is no demand there is no supply. Accordingly, this study considers the heroin rehabilitation centres as organizations with the prime aim of curbing demand through rehabilitation of those previously addicted to heroin and hence making supply minimal.

In sum, the present study recognizes that in many countries the principal emphasis continues to be on supply reduction through law enforcement agencies, which as a strategy has to a large extent failed to control the supply of illicit drugs. Nonetheless, official recognition of the need for demand reduction through education, treatment and rehabilitation seems to be growing in many countries. As a result, there is need to assess the viability of such programmes in reducing demand. Conformably, the present study is one of such efforts as it set out to evaluate

the effectiveness of heroin rehabilitation centres in facilitating rehabilitation and social reintegration of heroin users.

CONCEPTUAL FRAMEWORK

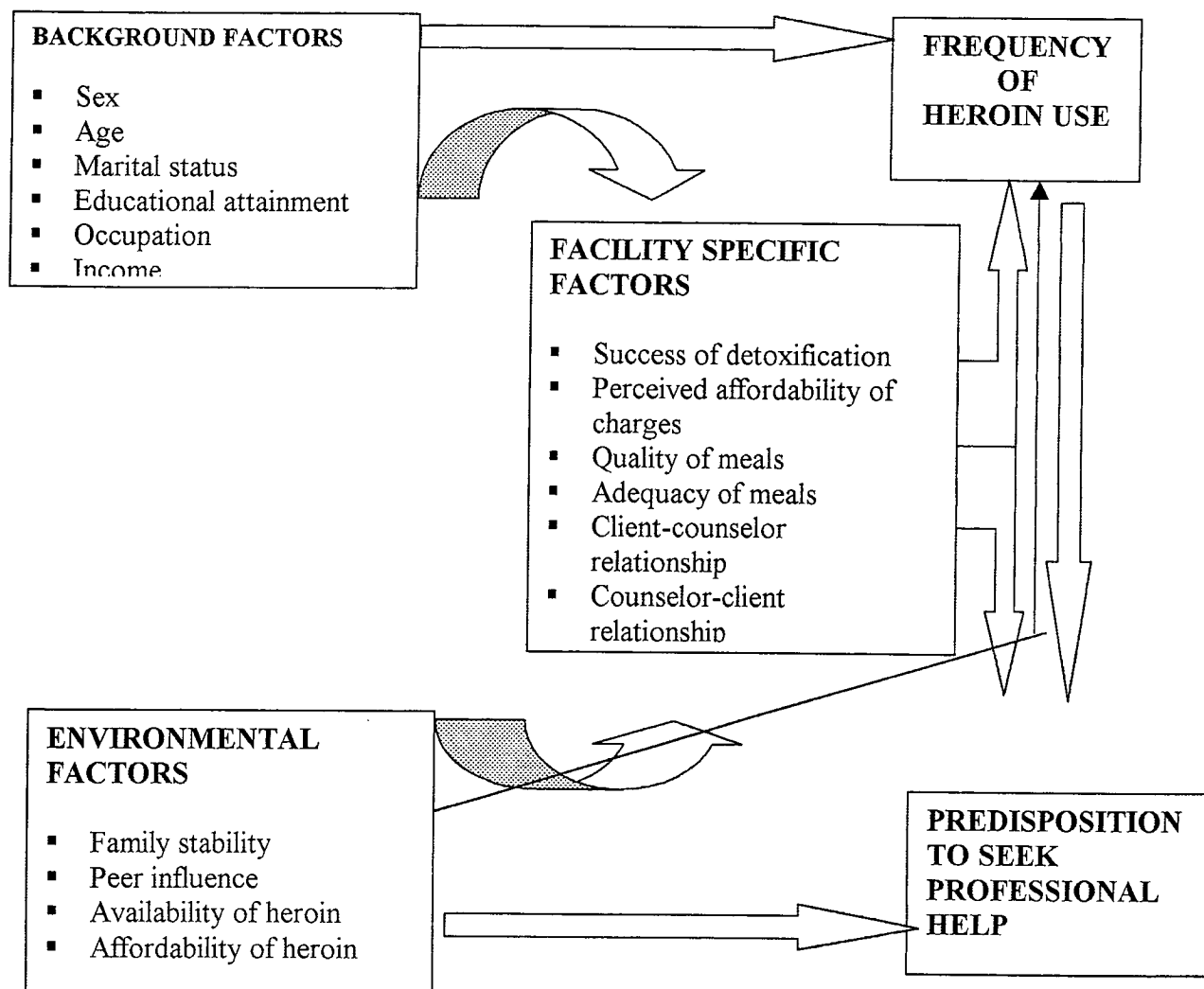
This study was geared towards understanding the effectiveness of heroin rehabilitation centres in the study sites. However, to understand the effectiveness of heroin rehabilitation centres this researcher recognizes the interdependence nature of factors and conditions underlying heroin use and rehabilitation work. To this effect, the study was designed in a way that it would be able to explore the effectiveness of heroin rehabilitation centres by focusing on both heroin use and rehabilitation processes. More specifically, the study attempted to address issues of pre-heroin use, use, rehabilitation and its outcomes. To achieve this, two (2) simple conceptual frameworks were constructed showing how the independent variables of the study relate to the dependent variables. The underlying assumption was that independent variables in Figure 2.1 and Figure 2.2 are associated with frequency of heroin use and predisposition to seek professional help respectively.

The conceptual framework in Figure 2.1 has three main components showing the relations among variables. Background characteristics such as sex, age, educational attainment, occupation, marital status and income have a bearing on the frequency of heroin use and predisposition to seek professional help. These personal attributes are important in that men and the youth are more inclined to experiment on drugs compared to women and old people respectively. Education is important because the educated may be more knowledgeable about the effects of drug use than the less educated, while occupation and income are prohibitive or facilitative in terms of accessibility and affordability of drugs of abuse.

Similarly, environmental factors may relate to frequency of heroin use and predisposition to seek professional help. Environmental factors such as family stability, availability and affordability of heroin, and peer influence affect the frequency of heroin use and inclination to seek help. For example people from unstable families lack proper parental guidance. Lack of parental guidance may precipitate the frequency of heroin use and affect an individual's predisposition to seek help. Heroin availability and affordability have the effect of making the drug more accessible to the users hence influencing its frequency of use and predisposition to seek help. Further, peers can be an influential force in heroin use behaviour. Peer pressure is a factor because people tend to emulate the behavioural tendencies of their friends to express a sense of belonging. Thus, if such behavioural tendencies are in favour of heroin use or are against rehabilitation they may affect individual's frequency of use and readiness to seek help. As agents of socialization, family and peers shape one's perceptions and attitudes including those related to heroin use and inclination to seek help.

Heroin user's characteristics and environmental factors are mediated by facility specific factors in their relation to frequency of use and predisposition to seek help. Facility specific factors include success of detoxification, perception of charges, adequacy and quality of meals, client-counselor and counselor-client relationships. Facility specific factors are mediators because they are instruments shaping the perceptions and decision-making processes of heroin users to seek help. Such perceptions and decisions may have some effects on the frequency of heroin use. Apparently, the three variables namely, heroin user's characteristics, environmental and facility specific factors; also interact with each other but this was not the focus of this study.

Figure 2.1: A Conceptual Framework of Correlates of Frequency of Heroin Use and Predisposition to Seek Professional Help



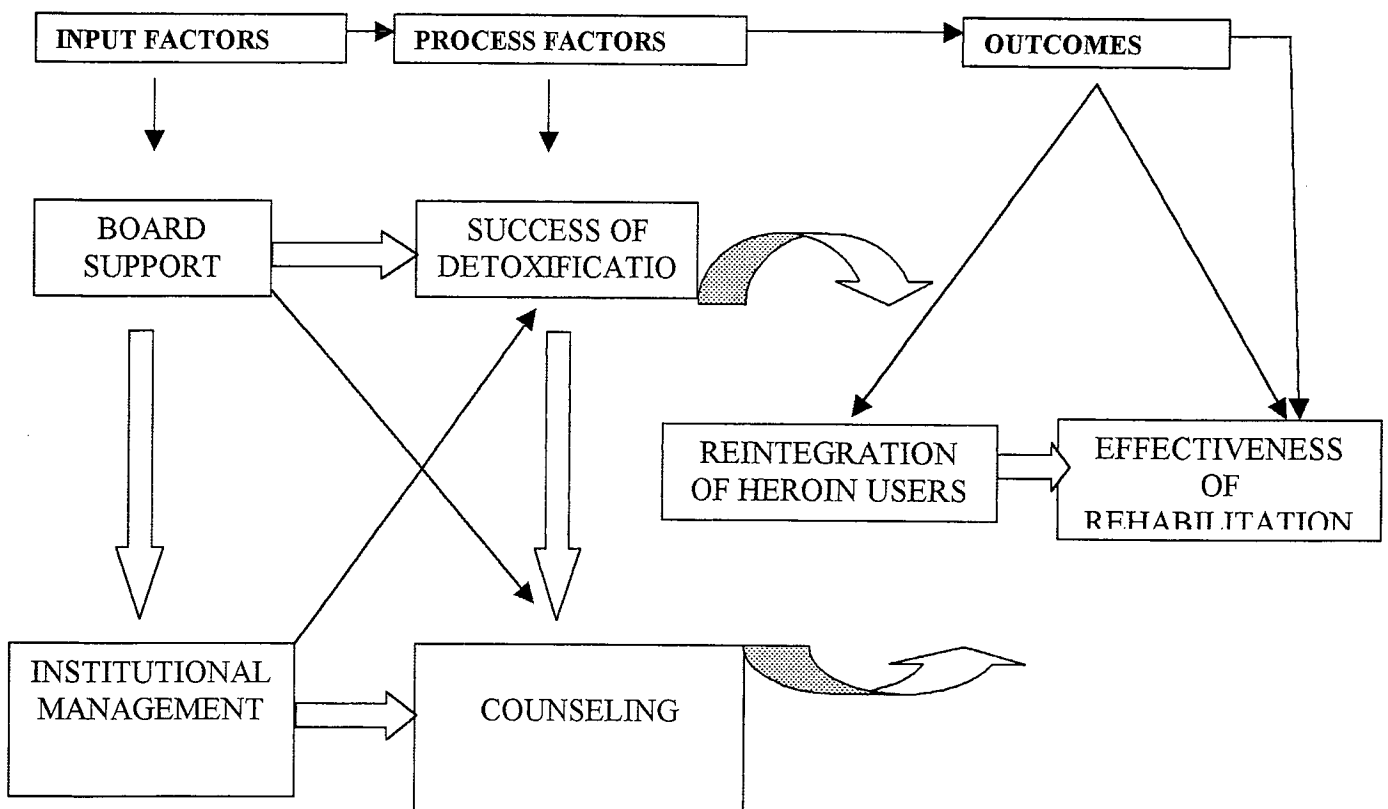
The second conceptual framework in Figure 2.2 has also three components representing a summary of the variables considered to have an influence on the effectiveness of heroin rehabilitation centres. Input factors such as board support and institutional management have a bearing on the effectiveness of heroin rehabilitation centres. Input factors are important in that they influence workers motivation and above all smooth operations of rehabilitation centres. For instance, board support and institutional management are not only important for making decisions but also in ensuring availability of equipments and supplies for the operation of

rehabilitation centres. Availability of equipments and supplies influence the perceptions and attitudes of heroin users' with regard to the quality of services being offered in these centres. Significantly, such perceptions have a bearing on the effectiveness of heroin rehabilitation centres.

Likewise, process factors relate to the rehabilitation outcomes. More specifically, process factors such as detoxification and counselling affects social reintegration and effectiveness of heroin rehabilitation centres. For instance, heroin users who have had successful anti-heroin therapy and counselling may be easily integrated into the community. These users are also more likely to consider heroin rehabilitation centres to be effective.

Figure 2.2: A Conceptual Framework of Correlates of Effectiveness of Heroin

Rehabilitation Centres



In sum, Figure 2.2 shows that input factors (board support and institutional management) interrelate with process factors (success of treatment and counselling) to produce certain outcomes (social reintegration and effectiveness of rehabilitation centres). Details about empirical analyses of these factors are presented in Chapters Five and Six of this work.

SUMMARY

The preceding sections are summaries of the major contemporary theoretical approaches to understanding organizational effectiveness. None of the explanations is capable of standing on its own despite what some of the proponents might argue. Indeed, each approach has its special insights and applicability in the present research.

It is also worth noting here that as organizational analysis, as a field of study, moves into the 21st century there is widespread acceptance of the need to apply these theories in combination rather than as competing explanations. The research by Pfeffer and Davis-Blake (1987) is an example here, as is that by Fligstein (1985), Hamilton and Biggart (1988), Singh et al (1986) and Shauri (2000; 2001). These researches do not test theories against each other but rather seek to explain the largest amount of variance in organizational effectiveness analysis.

Further, there appears to be a strong sentiment among organizational theorists that time has come to cease being “paradigm warriors” (Aldrich 1988, Hall 1991), and instead seek fuller explanations through combining perspectives. As this is done, theoretical growth will be evident and we may be able to move towards the elusive goal of specifying which theoretical explanations work, in which settings, and thus have meaningful explanations of organizations. This thesis is an effort in the use of a combination of theories to understand organizational behaviour in the management of a fundamental social problem. The conceptual frameworks, in

figure 2.1 and 2.2 above, aptly captured these factors in explaining the study's dependent variables. The next chapter examines the research methodology used in this study.

CHAPTER THREE

METHODOLOGY

Site Description

Coast Province is one of the eight provinces in the Republic of Kenya. The province is divided into seven administrative districts. These districts include Mombasa, which is the provincial headquarters, Kwale, Taita-Taveta, Tana River, Kilifi, Lamu and Malindi. The province was selected because it borders the Indian Ocean and this makes it a conduit through which traffickers can easily transport drugs. More so, the Ocean line has got many local ports, in addition to the Mombasa harbour, which have historically been known by Ocean vehicle captains who can easily use them without being noticed.

In addition, the province has many beautiful scenes, which attract foreigners through tourism industry. The tourists have been seen as potential users of drugs, thus increasing trafficking and commercialization of dangerous drugs.

Finally, the province shares international boundaries and air links with other countries like Somalia in the north and Tanzania in the south. These borders are difficult to patrol and therefore can be easy routes for drug trafficking. More significantly, the province has an international airport at Mombasa with feeder airstrips in Malindi, Lamu and Kwale districts making the coast province a prime venue for international drug trafficking. Thus, the spill over effects of these illicit drugs has compounded local consumption. This has resulted in a social problem of drug abuse and addiction at the Coast.

Study Sites

Coast province that is the focus of this study is one of the eight provinces of the Republic of Kenya. This study was conducted in five purposively selected districts of the province. The

districts selected include Mombasa, Kwale, Kilifi, Malindi and Lamu. These districts were selected because they share borders with the Indian Ocean and are in this respect popular destinations for heroin traders from the high seas. In view of the above mention factors therefore the Kenyan coast has a relatively high rate of drug abuse and addiction than other parts of the country. In fact, this view is corroborated by the principal researchers own experience when he worked with Muslim Education and Welfare Association Rehabilitation and Resource Centre (MRRC) as a Project Administrator.

Further, these districts have commercial, agricultural, tourism and industrial potential and other activities that demonstrate the diversity of economic activities in the province (Republic of Kenya 1994). Such activities tend to support the drug trade. Mombasa, Kwale, Kilifi, and Malindi for instance are the heart of tourist activities, where overseas drug peddlers compound the commercialization of illicit drugs. Instructively, private planes land easily in these areas and may be mistaken as carrying tourists, but they may actually be supplying drugs to the local markets. It is thus from these districts that the sample for the study was drawn.

Study Design

This was an evaluation study design whose thrust was to gauge the extent to which rehabilitation centres at the coast have achieved some of their manifest and latent objectives with regard to rehabilitating heroin users. In this respect it pays attention to the cannons of an evaluation study namely to judge success or failure strictly on the basis of stipulated achievement targets.

Units of Analysis

The study had three units of analysis that included: -

1. Heroin users/addicts.

2. The heroin rehabilitation centres and;
3. Key stakeholders (board members, staff of heroin rehabilitation centres, police, prison and medical officers).

Sample Size

The study targeted a sample size of 459 informants. These included 384 informants, both Institutionalized Heroin Users (IHUs) and Non-Institutionalized (NIHUs), 30 Rehabilitation Centre’s Board Members (RCBMs) and 30 Counsellors in the studied rehabilitation centres. The five rehabilitation centres were MEWA Rehabilitation and Resource Centre (MRRC), Sisi Na Maendeleo (SINAM), Omari Project, Bofu Maskan and Reach Out rehabilitation centre. Finally, the study interviewed 5 Anti-Narcotic Police Officers (ANPO), 5 Prison Warders (PWs) and 5 Medical Officers (MOs) one from each of the five selected districts. The rationale for the selection of the size of each of the sub-samples is detailed in the subsequent sections of this chapter. The study sub-samples are carried in Table 3.1.

Table 3.1: Sub-samples of the study informants

IHUs	NIHUs	RCBMs	Counsellors	ANPO	PWs	MOs
189	195	30	30	5	5	5

Source: Field data

However, the rationale behind the selection of the respondents of the study, *inter alia*, was to ensure that almost all the views of the stakeholders involved in drug abuse work were included in the study. To ensure this, a combination of both probability and non-probability sampling techniques was used.

Sampling Design of Heroin Users

This study was largely a survey design with certain aspects of observation design, especially when gathering information on heroin users in rehabilitation centres. As indicated above, the study targeted a sample size of 384 heroin users. This is because heroin users are a hard to reach population and this number is requisite to perform meaningful statistical analysis and comparisons.

More precisely, the study obtained a sub-sample of 189 institutionalized heroin addicts and 195 heroin users who were non-institutionalized. The larger number of heroin users who were not inmates slightly tallies with the fact that there are more heroin users who are not institutionalized than those who were institutionalized in the region (Susan 1995).

To draw a representative sample of the heroin users, the study adopted both the principles of probability and non-probability sampling. The probability techniques used in this study include; multi-stage cluster sampling, stratified random sampling with proportions and systematic sampling in combination with simple random sampling. Purposive sampling was the non-probability sampling technique adopted by this study.

The combination of sampling techniques was to ensure comprehensiveness of the study sample. The actual selection of elements into the study sample was as detailed in the sections that follow:

Selection of Institutionalized Heroin Users (IHUs)

In the selection of the 189 institutionalized heroin addicts, the study made use of all the five heroin rehabilitation centres already mentioned. The selection of the number of heroin addicts in the five heroin rehabilitation centres was done using stratified random sampling with proportions.

Practically, the technique entailed obtaining a proportion for each stratum by multiplying the sample size with the total number of addicts in each centre and dividing it by the population of inmates in the selected centres (Schutt 1996). The technique was adopted because in addition to randomness, stratification introduced a secondary element of control as a means of increasing precision and ensured a representative sample was studied.

To obtain the units of observation (i.e. informants), systematic random sampling was utilized within each stratum. The rationale behind this was that it minimized time and increased sampling efficiency in the selection process. Because female inmates were extremely few randomness was violated and all of them were included in the study.

Selection of Non-Institutionalized Heroin Users (NIHUs)

In the sub-sample of 195 heroin users who were not inmates of rehabilitation centres, the selection was done using multi-stage cluster sampling technique. The technique was adopted because it is the most appropriate when there is no sampling frame for the population of study (Schutt 1996), which was the case with regard to heroin users who were not institutionalized.

The general strategy was to break down the population of study into groups of cases called clusters and then a sample of clusters was selected randomly (Moser and Kalton 1971).

The multi-stage cluster sampling for the study took the following stages: -

- **Stage One:** As observed earlier, the following districts were included in the study: Kwale, Mombasa, Kilifi, Malindi and Lamu. These districts were purposively selected to form the first stage of multi-stage sampling for the study. Their selection was purposive because they share borders with the Indian Ocean and therefore potential conduits for heroin smuggling. As will be explained shortly an equal number (39) of heroin users were selected from each of

these districts. The rationale behind this was to ensure that the study incorporated the divergent experiences and views of heroin users from a large section of the province.

- **Stage Two:** This involved the selection of divisions. Accordingly, all the divisions in the selected districts were listed down and a sample of two divisions was drawn from each district using simple random sampling method. This gave a total of 10 clusters or divisions (i.e. $2 \times 5 = 10$).
- **Stage Three:** From the list of 10 clusters, another list of the number of locations in each of the selected clusters was obtained. Using this list a purposive sample of one location in each of the two clusters in each district was selected, giving a total of 10 locations. These locations were selected because they were cosmopolitan in nature characterized by high heroin use. Apparently, here purposive sampling, which is based on the assumption that the investigator can use “professional expertise and intuition” (Mulusa 1990:104), has been combined with the multi-stage sampling technique. The rationale behind the combination of techniques is to select areas where the heroin problem is more salient.
- **Stage Four:** Using the list of the purposively selected locations, the researcher obtained more clusters based on the criteria of heroin use areas, popularly known as *Maskans*. Following this classification the researcher randomly sampled an average of three *Maskans* in each of the ten locations. Each of the selected *Maskan* clusters was then visited and a list of heroin users compiled. The list was later used as the sampling frame from which an average of six heroin users were drawn from each of the selected *Maskan* clusters using systematic random sampling method. A deliberate attempt was made to include female users since they were extremely few.

Definition and Operationalization of Key Variables Used in the Study

Table 3.2 present definitions and measurements of the various key variables for the study.

Table 3.2: Operationalization of the key variables for the study

Key Variables	Variable Definition	Measurement
1. Heroin Abuse (Quantitative Dependent Variable).	➤ Non-medical use of heroin	• Frequency of heroin use daily.
2. Predisposition to seek help (Quantitative Dependent Variable).	➤ Access for services	• Frequency of seeking professional help.
3. Background Factors (Independent Variable):		
(a) Age	➤ Number of years since an addict's first birthday.	• Actual number of years at the time of interview.
(b) Occupation	➤ Refers to the addict's major means of livelihood.	• Actual job position held.
(c) Income	➤ Refers to the amount of money accrued monthly.	• Actual monthly disposable funds.
(d) Level of Education	➤ Refers to years or level of schooling completed.	• Actual number of years of schooling.
(e) Sex	➤ The biological characteristics of being male or female.	• Male or female
(f) Marital Status	➤ Social recognition of being a husband, wife, widow, widower or single.	• Actual socially recognized status
4. Environmental Factors (Independent Variable):		
(a) Family instability	➤ Refers to tension and conflicts in the family unit.	• Degree of intimacy within the family.

(b) Availability of heroin	➤ Whether or not heroin is accessible.	• Frequency of heroin use.
(c) Affordability of heroin	➤ Whether heroin users perceive costs of heroin to be expensive or cheap.	• Actual price of heroin dosage.
(d) Peer influence	➤ Involvement of heroin users with similar colleagues.	• Frequency of heroin use as a group activity.
5. Facility Specific Factors (Independent Variable):		
(a) Success of detoxification	➤ Ability of anti-heroin therapy to control physical withdrawal symptoms.	• Degree of confidence of addicts in efficacy of the anti-heroin therapy.
(b) Perceived affordability of charges	➤ Whether heroin users perceive costs of centres to be expensive or cheap.	• Actual monies levied.
(c) Quality of meals	➤ Heroin users assessment of the tastiness of meals.	• Degree of liking for the meals.
(d) Adequacy of meals	➤ Heroin users assessment of the amount of available food.	• Degree of sufficiency of the meals.
(e) Client - counselor relationship	➤ Inmates' attitudes towards staff.	• Degree of friendliness towards staff.
(f) Counselor - client relationship	➤ Counselors' attitudes towards inmates.	• Degree of friendliness towards inmates.

6. Effectiveness of heroin rehabilitation centres (Qualitative Dependent Variable):	Indicators	Measurements
	➤ <i>Good Management</i>	<ul style="list-style-type: none"> • Frequency of supervision of staff. • Frequency of supervision by board. • Purposes for which funds used. • Status of physical plant.
	➤ <i>Successful Counselling</i>	<ul style="list-style-type: none"> • Quality of counselors • Frequency of sessions. • Counselor-Client relationship
	➤ <i>Successful Treatment</i>	<ul style="list-style-type: none"> • Absence of withdrawal symptoms. • Incidences of relapse.
	➤ <i>Good Board Support</i>	<ul style="list-style-type: none"> • Frequency of attending meetings by members. • Frequency of visits to the centre. • Board's management relations.
	➤ <i>Successful reintegration of heroin users</i>	<ul style="list-style-type: none"> • Community acceptance of users. • Resumption of users social roles

Data Collection

In this study, just like other surveys, interviewing using a standard Interview Schedule was utilized to elicit information from 384 heroin users. The study relied mainly on one-to-one interviews because the information sought was personal and sensitive. The technique also allowed for probing vague responses to get more clarity. Furthermore, face-to-face interview enabled the interviewer to note situations of evasive responses or resistance to give responses, which are themselves research findings. In addition, in-depth interviews were held with senior anti-narcotic police officers, prison warders and medical officers to get more insights on the problem under investigation.

Focus Group Discussions (FGDs) were conducted with rehabilitation boards' members and counselors. These were geared towards collecting qualitative data on the operations of centres, stakeholders' attitudes, and perceptions regarding the effectiveness of the centres, and the strategies used in rehabilitation work. This information was useful in supplementing survey data.

Selected observations were utilized to confirm information from interviews and Focus Group Discussions, while secondary sources of data like relevant reports, theses, dissertations, books, journals and manuals were reviewed to supplement data gathered through survey, Focus Group Discussions, in-depth interviews and observations. More significantly, these sources of data were helpful in comparing and clarifying the primary information and ascertaining the varying perspectives with the existing literature.

Problems Encountered During Field Work

A number of problems were experienced during the study. First, there were instances of delay in releasing funds for fieldwork on the part of Kenyatta University. This necessitated rescheduling of appointments with the study informants.

Second, a transportation problem was experienced because the study coincided with a nation wide strike by public service vehicles protesting against new road regulations. Moreover, many of the roads in the province were in a state of disrepair, thus slowing down the speed of travel. More so, some of the roads, particularly the Malindi to Lamu route was served by very few public transport vehicles further compounding the problem. Rescheduling some of the appointments with the respondents circumvented this problem.

Third, given the nature of the study (drug abuse) there were open suspicions over the choice of heroin users. More precisely, some interviewees questioned why they and not their

friends were sampled for the study. This problem was resolved by giving an elaborate explanation that the intention of the study was not to interview everybody. An explanation was also given to make them understand that the benefits that may accrue from the survey should benefit the community. This helped dispel fears that those in the sample may have been selected for prosecution, as drug abuse is a criminal offence in Kenya.

Fourth, in Kilifi district the interviewing of heroin users coincided with a government crackdown on drug abusers and traffickers. The government team started their operation in the same week after we had had some interviews with the heroin users. This raised a lot of suspicion among heroin users and peddlers. Meeting the *Maskan* heads of the heroin users and explaining to them that there was no link between the study and the government crackdown eased the tension. As a result, we obtained the necessary co-operation from them and thus we managed to complete our work in the district without further suspicions.

Fifth, there were rude respondents who saw the interview schedules and key informants guides as a bother to them. This situation was exacerbated by the fact that the study was on a sensitive topic. This situation was experienced mainly in Kwale, Lamu and Mombasa districts. In fact, some of the selected users bluntly refused to be interviewed. To solve this problem, we had an obligation to “beg” and reason with them, and in the process some respondents saw the sense and agreed to be interviewed. Those who completely refused to be interviewed were replaced by taking the next respondents on the sampling frame.

Sixth, during the interview, some interviewees took the opportunity to elaborate on their heroin related miseries. While this took a lot of our study time it would have been extremely rude and unprofessional to shelve their talks. This problem was solved by carefully steering back the users into the interview schedule discussion.

Seventh, there was the problem of other heroin users staying on as we held interviews with their colleagues. This was more the case with the heads of the *Maskans*. However, some users wanted their heads or colleagues to attend so as to stand witness in case we misinterpreted their answers. Accordingly, we had to make it clear that the interviews were confidential; in the process some respondents saw the sense and had to excuse themselves from those present solving the problem. However, there were those who insisted that their colleagues' stay, where this condition did not prevent them from speaking freely and honestly, there was no objection and thus the session continued. However, where interference was noted the colleague was asked to leave.

Finally, there was the problem of organising Focus Group Discussions for both counsellors and board officials of the studied rehabilitation centres. In some cases the officials of the heroin rehabilitation boards were not easily available as they were busy attending private business. Likewise, In-depth interview informants for Kwale and Malindi districts were not easily accessible. Booking appointments with them solved this problem. In MEWA rehabilitation centre no problem was experienced because our visit coincided with a board meeting.

Techniques of Data Analysis:

The information collected required some systematic organization, interpretation and presentation. Statistical Package for the Social Sciences (SPSS) was used to provide both descriptive and inferential statistics.

Descriptive statistics were used to arrange, summarize and convey the distribution on key variables. The descriptive statistics used in this thesis included percentages, frequency distributions, measures of central tendency and contingency tables. These statistics were used to identify important characteristics regarding heroin users background, environmental and facility

specific factors. These factors were tested and analyzed in terms of their relationships to the dependent variables using inferential statistics. Essentially inferential statistics were utilized to predict and draw conclusions on the major factors explaining heroin abuse and addict's predisposition to seek professional help.

Finally, the presentation and analysis of data from the Focus Group Discussions (FGDs) and in-depth interviews were handled qualitatively. In this respect the collected information was presented in terms of common themes and domains. The rationale behind this was that the focus on the operations and effectiveness of heroin rehabilitation centres was exploratory in nature. Thus, both narratives (rich descriptions) and respondents' "voices" were used for this purpose. In the next chapter, a detailed presentation of the univariate analyses of the key variables of the study is done.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DESCRIPTIVE DATA

In this chapter, survey data are summarized and organized using descriptive statistics with a view of showing their nature and trends. Data was collected from 384 informants, comprising institutionalized and non-institutionalized heroin users from five (5) selected districts of Coast Province of Kenya. The presentation and analysis of data in this chapter will therefore be based on these informants. Some insights were also derived from observations, in-depth interviews and Focus Group Discussions (FGDs) with other stakeholders in the districts.

Significantly, this chapter forms the foundation upon which rigorous statistical manipulations in chapter five are based. This chapter therefore presents the univariate analysis of variables considered in the study with a view to capturing variations through descriptive statistical procedures. The format of the chapter is presented in the sections that follow.

A. CHARACTERISTICS OF HEROIN USERS

Under this section are the personal attributes of the studied heroin users that include sex, age, marital status, family size, educational attainment, occupation and income, in that order. Showing the characteristics of the heroin users was the criteria under which the background attributes were included in the study. In particular, some of the respondents' background characteristics may have a bearing on the frequency of heroin use and predisposition to seek professional help. The rationale behind this analysis is that identifying factors influencing the frequency of heroin use and predisposition to seek professional help were some of the study's objectives. Furthermore, heroin users' personal attributes are vital in the formulation of regression models explaining heroin use and predisposition to seek professional help in chapter five. The background characteristics of the informants are presented next.

(i) Distribution of heroin users by sex

Results in Table 4.1 show that out of 384 interviewed heroin users very few (9.1%) were female. This finding is not a surprise to this study as it supports survey data by the National Institute on Drug Abuse (2001) and casual observations made by this researcher in the surveyed heroin dens and rehabilitation centres to the effect that there were more male heroin users than their female counterparts. The higher percentage of male heroin abusers in the sample is probably explained by the fact that there were no official heroin rehabilitation centres for women in the area. Field experience shows that only one heroin rehabilitation centre (Omari Project) is attempting to mix men and women. However, this arrangement seems to be inappropriate option for women abusers given their minimal numbers compared to men in this centre.

Table 4.1: Heroin users by sex

Sex	Frequency	Percent (%)
Male	349	90.9
Female	35	9.1
Total	384	100.0

Furthermore, men are not only more mobile than women but also tend to interact more easily with strangers than women do. This makes it easier for men than women to be introduced or gain access to their drug of abuse.

(ii) Distribution of heroin users by age

In this study variation in respondents' age ranged from 8 to 50 years with a mean of approximately 29 years. Data revealed bi-modal ages of 24 and 25 years. As expected the age of almost all the sampled heroin users (98.1%) ranged between 8 to 45 years. The latter finding supports Susan's (1995), Abdool et al (1998) and National Agency for the Campaign Against Drug Abuse (NACADA) in 2004 surveys. More precisely, these studies established that the

majority of heroin users were youthful, implying that the most productive segment of the population was getting addicted.

(iii) Heroin users' marital status

The variable marital status was used to explain the frequency of heroin use and predisposition of heroin users' to seek professional help. Survey data on the distribution of respondents by their marital status is captured in Table 4.2.

Table 4.2: Heroin users' marital status

Marital Status	Frequency	Percent
Single	238	62.0
Married	71	18.5
Separated	31	8.1
Divorced	41	10.6
Widowed	03	0.8
Total	384	100.0

Results in Table 4.2 indicate that slightly over three fifths (62.0%) of the sampled heroin users' were single. The higher percentage of such users' in the sample was probably explained by the fact that about (60.0%) of the users were below 30 years and not too old to be perceived as late to get married. Study findings also showed that about 20% were married and a similar proportion were either separated or divorced.

An attempt was also made to find out the family size of the sampled heroin users. Findings of the study showed that a little over three fifths 235 (61.2%) of the respondents had no children of their own, while 149 (38.8%) had own children. It is not surprising when examining the issue of family size about the sampled heroin users' in that those who were single had no children, while just a little below 40% of the informants had own children. The heroin users' who revealed that they had own children, 34.4% had between 1-3 children, while those with 4 children and above were only 4.4%. Table 4.3 reflects these statistics.

Table 4.3: Heroin users' own children

Own Children	Frequency	Percent
No Children	235	61.2
1-3 Children	132	34.4
4 (+) Children	17	4.4
Total	384	100.0

The study also went ahead to establish whether heroin users had foster children that they reared. Results of the study revealed that an overwhelming majority 363 (94.5%) did not have foster children that they reared, while only 21(5.5%) had. Of the 21 out of 384 who had foster children, 5.2% had 1-2 children and those who had three and above were only 1.8% of the total. Data on the number of foster children that heroin users' reared are captured in Table 4.4.

Table 4.4: Heroin users' foster children

Foster Children	Frequency	Percent
No Foster Children	357	93.0
1-2 Foster Children	20	5.2
3 (+) Foster Children	07	1.8
Total	384	100.0

Data in Table 4.3 and 4.4 show that 235 out of 384 sampled informants did not have own children, while 357 out of 384 had no foster children that they reared respectively. Though this may largely be explained by the tender age of most heroin users' to be considered late to start families, it may also be explained by the inability of most users' to sustain not only marital relationships but also fending for the children due to their heroin use habit and unstable means of livelihoods.

(iv) Educational attainment of informants

Study results in Table 4.5 show that nearly all (94.8%) of the sampled heroin users' were literate. However, data on the level of education attained reveals that about a half (49.0%) had

between standard five (5) and standard eight (8) level of education. Those with some secondary education were 18.5%, while a little over one fifth (20.3%) had form four (4) level of education. Those with education beyond form four were extremely few.

Table 4.5: Heroin users' educational attainment

Level of Education	Frequency	Percent
No-level	20	5.2
Standard 1-4	24	6.3
Standard 5-8	188	49.0
Form 1-2	71	18.5
O-level	78	20.3
A-level	0 3	0.7
Total	384	100.0

Results in Table 4.5 confirm that slightly over a half (55.3%) of the sampled heroin users had reached between 1-8 grades of primary education. This finding reflects the education level of most of the Kenyan population (Mbatia 1996). The presence of a higher percentage of heroin users with such level of education in the sample is probably explained by their idleness due to lack of gainful employment and partly to the fact that they may be easier to influence. Nonetheless, nearly 40% of the heroin users' had secondary education at various levels. Many of these may also be idle due to high unemployment rate in the country. Significantly, heroin users are also victims of a school curriculum that does not address drug abuse at any level (KIE 2001).

(v) Occupational status of informants

Occupation as a variable was used in the study to capture the employment status of the sampled heroin users. Importantly, employment status determines whether an individual is idle or not. The assumption is that unemployment influences drug abuse and vice versa. The distribution of sampled heroin users by occupation is presented in Table 4.6.

Table 4.6: Occupational status of informants

Occupation	Frequency	Percent
Salaried Employees	22	5.7
Self employed	175	45.6
Wage earners	95	24.7
Unemployed	92	24.0
Total	384	100.0

Results of the study show that majority (45.6%) of the informants were self-employed. The category self-employed included fishing, beach operators, masons, fishmongers, shoemakers, salonists, musicians, and welders among others. The finding reaffirms the important fact that the informal sector is playing a key role in generating employment opportunities for Kenyans. The study also found out that salaried heroin users were very few. Their insignificant number can probably be explained by the fact that salaried employment appears to prevent employees from getting involved in drugs (Abdool 1998). However, wage earning because of its non-permanent and also unemployment do not prevent individuals from getting involved in heroin use. This is probably because such individuals are idle and hence can easily be influenced into drug abuse.

(vi) Monthly income levels of informants

This variable was essential for the research to measure the heroin users financial status. The assumption was that income level influences heroin use both in terms of accessibility and affordability. Results in Table 4.7 show that almost half (47.5%) of the studied heroin users had monthly incomes ranging from Kshs 0 to Kshs 4,999, while 21.6% had incomes of between Kshs 5000 to Kshs 7, 999. The remaining 30.9% had incomes ranging from Kshs 8,000 to over Kshs 10,000. The higher percentage (47.5%) of those with low-income levels is explained by the fact that majority (45.6%) of the interviewed heroin users were involved in micro-business

enterprises for livelihood (see Table 4.6). Their low-income levels can probably be explained by the low volumes of sales due to the slow down in economic performance the country has been experiencing in recent years.

Table 4.7: Heroin users' monthly income levels

Income Levels in Kshs.	Frequency	Percent
0-999	74	19.3
1,000-1,999	14	3.6
2,000-2,999	21	5.5
3,000-3,999	39	10.2
4,000-4,999	34	8.9
5,000-5,999	30	7.8
6,000-6,999	25	6.5
7,000-7,999	28	7.3
8,000-8,999	37	9.6
9,000-9,999	19	4.9
10,000 (+)	63	16.4
Total	384	100.0

B. HISTORY AND PATTERN OF DRUG ABUSE AMONG INFORMANTS

This section traces the drug history and pattern of the studied heroin users' in Coast Province. The assumption is that drug abusers start with lower drugs before they graduate to more problematic substances such as heroin. The variables considered in this section included types of drugs, duration of use, age at first drug use, first drug used, reasons for use, frequently used drug(s), frequency of drug use, form of use and sources of drugs.

(i) Type of drugs, duration of use and status of current use among informants

These three variables were important in knowing the various types of drugs abused, their duration of abuse and current use among heroin addicts. Such knowledge is very crucial in designing drug treatment programmes. The types of drugs and their duration of use as mentioned

by informants are presented in Table 4.8 (a), while types of drugs currently being used by heroin addicts are presented in Table 4.8 (b).

Table 4.8 (a): Types of drugs and duration of use among informants (%) {N = 384}

Drugs ▼	Duration in years →	None	1-5	6-10	11-15	16-20	21-25	26(+)
Tobacco		31.8	14.6	23.7	10.1	17.5	1.0	1.3
Alcohol		47.9	25.8	13.8	4.7	5.2	1.3	1.3
Cannabis		22.9	22.1	29.2	8.6	16.2	0.5	0.5
Heroin		14.6	38.8	22.4	7.6	7.8	5.7	3.1
Cocaine		90.1	6.0	3.6	0.3	0.0	0.0	0.0
Psychotropic		65.4	21.1	6.8	0.0	1.8	2.9	2.0
Methaqualone		96.4	2.2	0.5	0.3	0.0	0.3	0.3
Khat		95.3	1.6	2.8	0.0	0.3	0.0	0.0

Table 4.8 (b): Types of drugs and status of current use among informants (%) {N = 384}

Types of Drugs	Still Using		
	Yes	No	No Response
Tobacco	69.5	6.5	24.0
Alcohol	36.2	23.2	40.6
Cannabis	69.0	8.9	22.1
Heroin	76.3	9.9	13.8
Cocaine	8.3	20.1	71.6
Psychotropic	32.3	17.4	50.3
Methaqualone	1.8	16.1	82.0
Khat	3.4	6.0	90.4

From Table 4.8 (a), it is clear that most users of the various drugs have utilized them for between 1-10 years, implying that most users have done so for a short period. This finding is probably explained by the fact that most interviewed heroin users were relatively young as indicated earlier in this study and by Susan (1995).

It also appears in Table 4.8 (a) that alcohol, tobacco, cannabis and heroin, in that order, were the most popular drugs for heroin users. The higher percentage of users with a history of heroin use contradicts other studies such as those by Abdool (1998), Mwenesi (1995) and NACADA (2002) that indicated the popularity of tobacco, cannabis and alcohol among users. This unexpected finding reinforces field experience, which shows that most heroin users largely embark on this drug directly.

The table also reveals that heroin users' rarely acquired their drug use habit via methaqualone (96.4%), khat (95.3%), cocaine (90.1%) and psychotropic substances (65.4%). This is probably explained by the fact that some of these drugs such as cocaine, methaqualone and psychotropic substances are not readily available to users. Further, field experience confirmed that heroin users' dislike khat because it interferes with the exhilarating effect of heroin.

Regarding current use of the various drugs among the interviewed heroin users, Table 4.8 (b) reveals an interesting trend. It is clear, for example, that heroin (76.3%) is the most currently abused drug, followed by tobacco (69.5%) and cannabis (69.0%). The remaining drugs shown in Table 4.8 (b) were the least currently abused drugs. The higher percentage of current heroin users was expected since such users were the subjects of the study.

(ii) Age at first drug use among informants

Age at which an informant first abused a drug indicate how early heroin users have been involved in this habit. Such knowledge is significant in developing age specific awareness programmes for drug users in any country. Findings of this study indicate a variation in respondents' age at first drug use. More precisely, age at first drug use ranged from 8 to 34 years with a mean of 17.5 years, reconfirming an earlier finding of this study and Susan's (1995) finding that most heroin users at the coast are youthful. Data also reveals a modal age of 18 years and a median value of 17 years. This means that most users start using drugs at a very tender age.

Age at first drug use of a little over one half (52.6%) of the sample ranged between 8 to 17 years coinciding with primary school and lower secondary education cycles (see Table 4.9). The second largest percentage was comprised of those who started drugs at the age of between 18-22 years, coinciding with the final secondary school grade and the whole of the university cycle. These findings confirm that most drug abusers are at age levels where they can be reached by incorporation of drug abuse issues in the primary, secondary and university curricula.

Table 4.9: Age at first drug use among informants

Age in Years	Frequency	Percent
8-12	26	6.8
13-17	176	45.8
18-22	153	39.8
23-27	26	6.8
28 (+)	03	0.8
Total	384	100.0

(iii) Informants first substance of abuse

Results in Table 4.10 show the various drugs first used by subsequent surveyed heroin users. The results of the study show that slightly over three fifths of the sampled heroin users

acquired their drug habit through first smoking tobacco. This was followed by cannabis sativa, thus supporting Mwenesi (1995), Abdool (1998), NACADA (2004) and NIDA (2001) in their identification of tobacco and cannabis as the most common drugs for most ultimate heroin users. Illustratively, these two entry substances were the first to be used by about 90% of the informants.

Table 4.10: Informants first substance of abuse

First Drug of Abuse	Frequency	Percent
Tobacco	240	62.7
Alcohol	34	8.9
White Crest	01	0.3
Cannabis	101	26.4
Heroin	04	1.0
Khat	03	0.7
Total	383	100.0

When asked to give reasons why they first used the particular drugs, the informants gave responses highlighted in Table 4.11. Knowledge of the reasons why the informants first used particular drugs is important in informing anti-drug social reengineering strategies. In this study heroin users were asked to give at most three reasons explaining why they started using drugs.

Table 4.11: Reasons for first drug use mentioned by informants (n =212)

Reasons	No. of Mentions	Percent
Unemployment/Idleness	32	5.0
Peer pressure	349	54.9
Experimentation	33	5.2
Psycho-emotional relief	162	25.5
Ignorance of the dangers	28	4.4
Easy access to the drug	18	2.8
Customary/Culturally acceptable	14	2.2
Total Mentions	636	100.0

From Table 4.11, it is clear that peer pressure was the most cited reason for starting to use drugs among the informants. This was followed by their use as a palliative for psycho-emotional problems. These two reasons accounted for 80% of all mentions, thus underscoring their salience. The higher percentage of users who started using drugs through the influence of friends as well as to gain psycho-emotional relief from problems was expected since drug abuse, including heroin is normally a ritual group activity.

(iv) Informants frequently used drugs

Knowledge of the most frequently used drugs by the sampled heroin addicts was regarded as important in possible prevention and control measures. Table 4.12 shows drugs that are frequently used by sampled informants in this study.

Table 4.12: Most frequently used drugs

Type of Drugs	Frequency	Percent
Heroin	124	32.6
Tobacco	145	38.1
Cannabis	81	21.3
Psychotropic substances	12	3.1
Cocaine	05	1.3
Alcohol	09	2.3
Other	05	1.3
Total	381	100.0

Results in Table 4.12 indicate that three types of drugs were commonly used namely, in order of importance, tobacco, heroin and cannabis. The findings for tobacco and cannabis were expected as they reflect the current situation of drug abuse in the country (Mwenesi 1995, NACADA 2004). The table also shows that some of the informants did not use heroin as frequently as tobacco.

A follow up question was posed to informants regarding the intensity with which they use their preferred drugs. Such knowledge is indicative of the levels of drug addiction among the informants. Heroin users' intensity of drug use is presented in Table 4.13.

Table 4.13: Intensity of drug use among informants

Intensity	Frequency	Percent
Once a day	09	2.3
Twice a daily	61	15.9
Thrice a day	111	28.9
More than three times a day	200	52.1
Other	03	0.8
Total	384	100.0

It is clear that the sampled heroin users were intensive users' of drugs in the sense that 81% of them imbibe a drug three or more times daily. Those who take drugs with low intensity (once or two times daily) were less than 20%. Thus, results in Table 4.13 confirm unequivocally the high addiction to drug use by sampled informants.

(v) Main modes of drug intake

Mode of drug administration refers to the channel through which drugs are taken into the body of the users. The various ways of drug administration are presented in Table 4.14.

Table 4.14: Main modes of drug intake among informants

Modes of Use	Frequency	Percent
Smoking	279	74.6
Swallowing	12	3.2
Chase ⁸	13	3.5
Joint ⁹	10	2.7
Sniffing	09	2.4
Drinking	03	0.8
Cocktail ¹⁰	20	5.3
Intravenous	28	7.5
Total	374	100.0

From Table 4.14, it is clear that smoking is the main mode of using drugs (76.4%). This mode of administration has implications for respiratory conditions as the drug is directly inhaled in the users' respiratory system.

(vi) Main sources of drugs

Knowing where drugs are obtained by the users may help supply reduction agencies like the anti-narcotic police in devising appropriate intervention measures. This is significant because cutting down on supply will mean drug unavailability and hence reduction in abuse. The main sources of drugs cited by informants are presented in Table 4.15.

⁸ *Chase*, a short form for 'chasing the dragon', which is a mode of administration where heroin is prepared with tools and flame to be inhaled as it sublimates or vaporizes.

⁹ *Joint* is a mode of administration where heroin is mixed with mostly cannabis or sometimes cigarette and then smoked.

¹⁰ *Cocktail* is a mode of administration where heroin is used in combination with other mood enhancing drugs.

Table 4.15: Main sources of drugs among informants

Sources	Frequency	Percent
Chemist	02	0.5
Dealer/Pusher	311	81.8
Peers/Friends	06	1.6
Den /“Maskan”	55	14.5
Shops	04	1.1
Other	02	0.5
Total	380	100.0

As expected, findings of the study reveal that a little over four fifths of the informants obtained their drugs from dealers, while 14.5% got it from the dens. This is explained by the illegal status of these drugs, which makes it necessary for them to be sold in secrecy or in hidden places considered “safe”. The sale of drugs by pushers as revealed in this study is not a surprise. Indeed, field experience confirmed that informants got drugs from dealers some of whom were known by the law enforcement officers.

C. HISTORY AND PATTERN OF HEROIN USE AMONG INFORMANTS

The purpose of this section is to document the heroin use history among the sampled informants in Coast Province. This analysis is vital as it grounds the central theme of this study namely heroin use and abuse. Essentially, such analysis forms the basis for the rigorous statistical analysis of data in Chapter Five. Further, knowledge about heroin use and abuse is key for heroin intervention strategies for it is a problematic drug. The variables to be considered in this section include:

- Ever used heroin
- Age at first use
- Reasons for first use
- Heroin current use
- Reasons for current use
- Frequency of heroin use

- Use as a group activity
- Heroin availability
- Techniques of intake
- Frequency of use in groups
- Cost of heroin
- Sources of heroin
- Place of heroin use

(i) Informants heroin use status in the year preceding the study

Informants were asked whether they had started using heroin a year predate the study. Such information is useful in tracing the history and pattern of heroin use and abuse among respondents. The information on whether informants were already using heroin a year preceding the study is carried in Table 4.16.

Table 4.16: Informants heroin use status a year predate the study

Use	Frequency	Percent
Yes	376	97.9
No	08	2.1
Total	384	100.0

Results of the study show that almost all interviewed informants had started using heroin at least a year predate the study. This finding reflects how entrenched heroin use and abuse is among the respondents. Such high use in the previous years is probably explained by the ready availability of the drug in the area.

(ii) Informants age at first heroin use

The variable age at first heroin use was utilized to assess the entry age for heroin use and abuse among the respondents. Findings of the study reveal a shared mean and median entry age of 21 years, with a mode of 20 years. In other words, the average age for first using heroin

among informants is 21 years while age 20 is the most likely entry point for many informants. Table 4.17 shows the informants reported age at first heroin use.

Table 4.17: Age at which informants started using heroin

Age at First Use in Years	Frequency	Percent
10-14	04	1.1
15-19	107	28.5
20-24	193	51.5
25-29	60	16.0
30 (+)	11	2.9
Total	375	100.0

Ungrouped data from the study reveals that some informants started using heroin when they were 10 years old, while others started at 39 years. Accordingly, the study reports an age range of 29 years reflecting a great variation in age at first heroin use among informants. Table 4.17 also shows that slightly over one half of the respondents started using heroin at the age bracket of 20-24 years, while close to 30% started using heroin between age 15-19 years. Overall, almost all (97.1%) of the sampled informants began using heroin below the age of 30 years. This finding confirms those of Susan's (1995), Abdool et al (1998) and NACADA (2001), that heroin users are mostly youthful. Early entry into heroin abuse can be explained by an earlier finding, in Table 4.6, that most of these youth are not in stable employment. This can make them more vulnerable and susceptible to peer pressure leading them to experiment on new substances.

When asked to give reasons why they first used heroin, the interviewees gave various responses highlighted in Table 4.18. These reasons are significant in revealing how informants got introduced into heroin abuse behaviour. Such knowledge can inform social reform processes, especially in the designing of heroin prevention and control interventions.

Table 4.18: Reasons for first heroin use mentioned by informants (n = 225)

Reasons	No. of Mentions	Percent
Unemployment/Idleness	43	6.4
Peer pressure	245	36.3
Experimentation	55	8.1
Psycho-emotional relief	256	37.9
Ignorance of the dangers	37	5.5
Easy access to heroin	33	4.9
Others	06	0.9
Total Mentions	675	100.0

From Table 4.18, it is apparent that informants first used heroin as a palliative for Psycho-emotional problems. This was followed by peer pressure. These two reasons accounted for 74% of all mentions, thus underscoring their salience. This finding on higher heroin use for soothing and through the influence of friends is not a surprise to this study since heroin has strong pain killing effects and as a drug of abuse, it is normally ritualized among users in groups.

(iii) Current heroin use among informants

Current heroin use as a variable was introduced in the study to assess the number of informants who still use the drug. This kind of information can be useful in coming up with appropriate intervention measures to reduce incidents of heroin abuse. Obtained results in Table 4.19 indicate that 327 out of the 384 studied informants (85.2%) were currently using heroin. This is an extremely high proportion but it is not surprising given that heroin is one of the most addictive drugs. This situation is exacerbated among the users by the paucity of heroin rehabilitation centres in the Kenyan Coast. More so, the few available rehabilitation facilities are not effective, as they tend to experience high relapse rates among the addicts they have attempted to rehabilitate.

Table 4.19: Current heroin use among informants

Using Currently	Frequency	Percent
Yes	327	85.2
No	57	14.8
Total	384	100.0

When asked to cite reasons why they are still using heroin, the informants gave responses presented in Table 4.20. Information on why the informants are still using heroin is useful in providing reliable insights into viable measures that can ameliorate dependence on heroin. Obtained results on this question indicate that the dominant reason for continued use of heroin is actually a dependence issue namely that users' cannot do without it. Indeed, field experience shows that the available heroin rehabilitation centers are overwhelmed by the demand of heroin users seeking rehabilitation and high relapse rates. In fact, dependence on heroin has resulted in a paradox situation namely overwhelming demand for rehabilitation services in the few institutions that are available and concomitant relapses.

Table 4.20: Reasons mentioned for current heroin use (n = 213)

Reasons	No. of Mentions	Percent
Can't do without it	327	51.2
Unemployment/Idleness	14	2.2
Psycho-emotional relief	104	16.2
Peer pressure	16	2.5
Easy access to heroin	12	1.9
Stopped using heroin	166	26.0
Total Mentions	639	100.0

In addition, the single clearest reason given for current heroin use is psycho-emotional relief accounting for 104 out of the total mentions. This probably explains the high relapse rate among the users who have attempted rehabilitation. Interesting to note also is that Table 4.20 shows about one quarter of the studied informants reporting having stopped using heroin.

(iv) Frequency of heroin use

Apart from establishing the reasons for current heroin use, the study was also interested in finding out the frequency with which heroin is used. Frequency of heroin use is actually a pointer to the level of addiction among the interviewed users. More so, knowledge of frequency of use should help rehabilitation centers and users' alike, in devising strategies on how to cut down on heroin use through gradually reducing the frequency of use and quantity used. Table 4.21 carries information obtained from the informants on the frequency with which they use heroin on a daily basis. Any use below three times a day is considered relatively light (Susan 1995 and Abdool et al 1998).

Table 4.21: Frequency of heroin use

Frequency of Use	Frequency	Percent
Once a day	14	3.7
Twice a day	76	19.8
Thrice a day	130	33.9
More than thrice a day	147	38.4
Use when available	03	0.8
Stopped using	13	3.4
Total	383	100.0

Results of the study reveal that only 23.5% of the studied informants use heroin less than three times daily. In contrast slightly over seventy percent (72.3%) of the informants reported using heroin three or more times a day. This pattern is considered high use and is consistent with the high proportion of the informants who are dependent on this drug as reported earlier in Table 4.20.

(v) Main sources of heroin

The variable source of heroin for users' daily consumption is relevant in this study to inform supply reduction agencies on the best ways of targeting the sources and improve surveillance. The reported sources of heroin are presented in Table 4.22.

Table 4.22: Main sources of heroin among informants

Sources	Frequency	Percent
Dealer or Pusher	345	89.8
Peers or Friends	07	1.8
Den (Maskan)	23	6.0
Other	09	2.4
Total	384	100.0

It is instructive that the main sources of heroin coincide with the main sources for other drugs reported in Table 4.15, namely dealers/pushers and Maskans. This is explained by the illegal status of heroin business that makes it necessary for it to be done secretly and in hidden places considered "safe". The finding on the main sources of heroin is not a surprise in this study as it further confirms our earlier findings on other drugs that drug trade in general is a clandestine undertaking.

(vi) Main places of heroin intake

Knowledge of where heroin is used can be useful in formulating surveillance strategies by the "demand and supply reduction agencies" in the study sites. A question was therefore included in the study regarding main places where heroin is used (intake venues). The answers to this question are reported in Table 4.23. Obtained results indicate that Maskans are the main places of imbibing heroin among informants. This was followed by safe private places namely at home, dealers house and abandoned buildings. The choice of secret places for heroin intake is

probably necessitated by the illegal status of the drug. Those who use it in safe public places such as night clubs, play grounds and at the beach were only 8.4%.

Table 4.23: Main places of heroin intake

Use Areas	Frequency	Percent
Den (Maskan)	185	50.1
Safe private places	153	41.5
Safe public places	31	8.4
Total	369	100.0

(vii) Main techniques of heroin intake

The study also attempted to find out the major techniques of heroin intake by the interviewees. These techniques are carried in Table 4.24. Results of the study show that smoking stands out as the main technique of heroin intake. Other techniques include intravenous/injecting and chasing the dragon accounting for 13.4% and 12.8% of the studied informants respectively.

Table 4.24: Main techniques of heroin intake

Techniques	Frequency	Percent
Sniffing	19	5.0
Smoking	250	66.3
Intravenous	51	13.5
Chase	49	13.0
Swallowing	08	2.2
Total	377	100.0

The finding that 51 informants use injection as a technique of heroin administration is a surprise to this study. This is probably a reflection of the growing complexity of heroin users. Of more concern, however, is whether the users' share the injecting equipments to administer their daily doses. Sharing needles, syringes and other contaminated injecting equipment can lead to risks of transmitting diseases such as Hepatitis B and C and HIV virus.

D. FACTORS RELATED TO HEROIN USE AND PREDISPOSITION TO SEEK HELP

In this section the study reports some key factors that have a bearing on the pattern of heroin use and predisposition to seek professional help. The rationale behind this focus is that one aim of the study was to identify factors influencing heroin abuse together with those that affect heroin users' predisposition to seek professional help. These factors are family instability, peer pressure, availability and affordability of heroin in the studied areas. Accordingly, this section presents the descriptive analysis of those factors that are later used to test various associations.

(i) The family context of heroin users

Several theories cited in the literature, among them Situational Analysis, allude to the fact that certain environmental influences are factors that explain frequency of heroin abuse and predisposition to seek professional help. One of these factors is the family environment of heroin users. Following this line of thought the study attempted to look for evidence to validate the role of family environment in the frequency of heroin abuse and predisposition to seek professional help. More precisely, heroin users were asked to indicate whether or not parents are in a continuous union-i.e living together. The obtained responses to this question are reflected in Table 4.25.

Table 4.25: Heroin users by their parents union

Parental Union	Frequency	Percent
Married and Living together	132	34.8
Not living together	247	65.2
Total	379	100.0

The category "not living together" included those who were separated, divorced or widowed. As expected evidence in Table 4.25 shows that slightly over three fifths of the

informants reported that their parents are separated. The higher percentage of heroin users who revealed that their parents live apart reflects the problem of lack of proper parental guidance for them.

(ii) Availability of heroin

The variable availability of heroin in this study was included to confirm the thesis that easy access to drugs in an area normally triggers abuse. This thesis is advanced by Mwenesi (1995) when she says that drug trafficking in an area increases its availability. The distribution of the respondents by their rating of availability of heroin is captured in Table 4.26:

Table 4.26: Assessment of availability of heroin

Availability of Heroin	No. of Informants	Percent
Readily available	200	52.9
Frequently available	101	26.7
Sometimes available	72	19.1
Not available	04	1.0
Don't Know	01	0.3
Total	378	100.0

From Table 4.26, it is clear that over one half of the sampled heroin users acknowledge that heroin is readily available in their surroundings. A further 27% reported that it is frequently available. Thus, nearly 80% of the informants indicated that they have easy access to heroin. This finding corroborates our thesis that heroin trafficking including other narcotics is entrenched in the Coast Province of Kenya.

(iii) Affordability of heroin

Affordability of heroin as a variable was included in the study to measure its accessibility namely the ability to pay. Literature review shows that heroin and cocaine are the most expensive drugs in the world (Abdool 1998, NIDA 2001). Given the widespread economic

poverty at the Coast of Kenya the variable was included to assess what proportion of users' would have easy access to heroin.

Results of the study shown in Figure 4.1 reveal that 90% of the interviewed heroin users stated that this drug is either very expensive or expensive. This finding is in line with previous studies that confirm that heroin is indeed an expensive drug worldwide (Abdool (1998 and NIDA 2001).

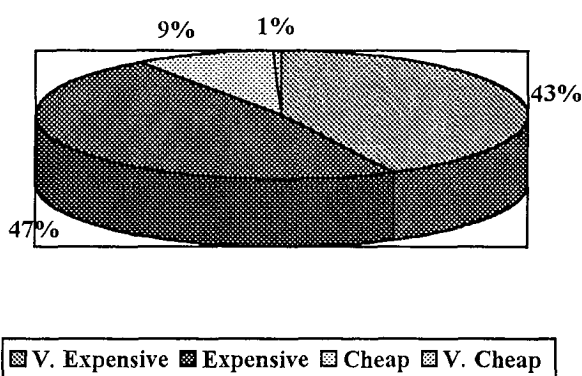


Fig. 4.1: Responses on affordability of heroin

An attempt was also made in this study to document the exact financial cost of heroin per sachet in the studied area. Findings to this question are captured in Table 4.27:

Table 4.27: Estimate of financial cost per sachet of heroin

Price per Sachet	No. of informants	Percent
Kshs 45.00-Kshs 95.00	17	4.5
Kshs 96.00-Kshs 146.00	153	40.7
Kshs 147.00-Kshs 197.00	25	6.6
Kshs 198.00-Kshs 248.00	176	46.8
Kshs 249.00 (+)	04	1.1
Free of Charge	01	0.3
Total	376	100.00

Information in Table 4.27 reveals that over one half of the interviewed heroin users (54.5%) stated that a sachet of heroin costs at least Kshs 147.00 reaffirming that heroin is an expensive drug. Indeed, ungrouped figures indicate that the modal price per sachet of heroin according to the interviewees is Kshs 200.00, with a median of Kshs 150.00 and mean of Kshs 149.60.

(iv) Peer influence

Peer influence in this study was used specifically to measure the frequency of heroin use as a group activity. Earlier evidence in this study showed that most people became heroin users due to peer pressure. The influence of peers in the use of heroin as stated by the sampled informants is carried in Table 4.28.

Table 4.28: Heroin use habits

Habits	No. of Informants	Percent
Alone	42	11.4
With friends	124	33.5
Both alone and with friends	204	55.1
Total	370	100.0

Results in Table 4.28 show clearly that those who use heroin on their own are very few being about 11% of the studied informants. Among those who say that they use it both with friends and alone the probability is that 90% of them use heroin with friends. Indeed, field experience confirms that heroin is used mainly with friends in dens and gardens.

An attempt was also made to establish the frequency of heroin use as a group activity among the users. Findings of the study are presented in Table 4.29.

Table 4.29 Heroin use in groups

Use in groups	Frequency	Percent
Once a day in a group	45	12.6
Twice a day in a group	81	22.6
Thrice a day in a group	122	34.1
More than thrice a day in a group	85	23.7
Alone	25	7.0
Total	358	100.0

Indeed, when asked to indicate how frequently the informants use heroin in groups daily, only 7.0% retained the response that they used heroin alone. The implication is quite clear that 93.0% of the heroin users who responded to the question use heroin within a group context and with high frequency (see Table 4.29).

E. ATTRIBUTES OF REHABILITATION CENTRES REGARDING SURVEYED HEROIN ISSUES

In this section the study reports facility-specific factors that are assumed to have a bearing on heroin use and predisposition to seek professional help among abusers. The focus on facility-specific factors was another aim of this study. For that reason, this section presents the analysis of some selected facility-specific factors that would later be included in more elaborate statistical analysis in Chapter Five. The facility factors considered are success of detoxification, quality and adequacy of meals, perception of charges and client-counsellor relationships.

(i) Informants perceptions regarding detoxification issues

Perceived success of detoxification as a variable was included in the study to assess the perceived success of anti-heroin therapies that are given in the various heroin rehabilitation centers in the Coast region. A component of perceived success of detoxification is a sense of wellness felt by those who are recipients of the process. Success of anti-heroin therapy is primary in the rehabilitation process of heroin users. More precisely, detoxification is geared at

neutralizing the toxicity of heroin in the users body and arresting craving for the drug. This therapy marks the beginning of other processes of rehabilitation such as counseling. The assumption here is that perceived success of detoxification will influence frequency of heroin use and predisposition to seek professional help.

Results of the study in Table 4.30 show that slightly over three fifths of the informants reported that detoxification is useful. This finding corroborates field observation, which indicate that heroin users are confident with the anti-heroin therapy offered in these centres. Table 4.30 also shows that a few informants rated detoxification as being not successful further underscoring the confidence heroin users have on the centres with regard to this process.

Table 4.30: Assessment of perceptions on detoxification

Degree of Success	Success of Detoxification		Wellness after Detoxification		
	<i>No. of Informants</i>	<i>Percent</i>	Degree of wellness	<i>No. of Informants</i>	<i>Percent</i>
Very successful	45	11.8	Very well	61	15.9
Successful	111	29.1	Well	144	37.5
Satisfactory	91	23.9	Satisfactory	78	20.3
Not successful	46	12.1	Not well	38	9.9
Not Detoxed	63	16.5	Not detoxed	63	16.4
No opinion	25	6.6	No opinion	0.0	0.0
Total	381	100.0	Total	384	100.0

Further, informants were asked to rate how well they felt after detoxification? Responses to this question in Table 4.30 reveal that slightly over one half of the studied heroin users reported that they felt well or very well after detoxification. This further corroborates the confidence heroin users have on the effectiveness of anti-heroin therapy in the available rehabilitation centres. If we consider the 20.3% who said that the therapy was satisfactory then contentment with detoxification was expressed by almost 90% of the informants who received therapy. This finding is supported by field observation, which revealed that most heroin users

visit the centres and health care facilities for detoxification and thereafter either escape or demand to be discharged.

(ii) Perceived adequacy and quality of meals

Adequacy of meals as a variable is a crucial factor in rehabilitation work since most users are emaciated due to heroin addiction and that it gives a psychological satisfaction to the users that they have enough to eat. Further, its important in helping them to keep up with the strength of drugs used in the detoxification process. However, a component of adequacy of meals is its quality. Quality of meals is important in the rehabilitation process because of its nutritious value and the fact that it may attract heroin users into the available centres. Indeed, adequate and quality meals can add value to the addicts' recovery process (Shauri 2000). The way informants perceived adequacy and quality of meals is shown in Table 4.31.

Table 4.31: Assessment of perceived adequacy and quality of meals

Rating of Meals	Adequacy of Meals		Quality of Meals	
	<i>No. of Informants</i>	<i>Percent</i>	<i>No. of Informants</i>	<i>Percent</i>
Very good	112	30.0	137	36.7
Good	145	38.9	137	36.7
Fair	48	12.9	32	8.6
Poor	14	3.8	12	3.2
Very poor	11	2.9	12	3.2
No opinion	43	11.5	43	11.6
Total	373	100.0	373	100.0

Survey findings in Table 4.31 show that slightly over three fifths of the informants perceived meals to be adequate, while nearly three quarters of those who responded to this question rated the meals to be of high quality. The positive finding on perceived adequacy and quality of meals is important as it may act as an attraction for others to join the rehabilitation centres. Indeed,

field observation revealed that most heroin users tend to spend too much time looking for money to buy the next dose of heroin at the expense of meals.

(iii) Perception of charges

The variable perception of charges was used to ascertain the affordability of levies charged for services in the available heroin centres at the Coast. Notably, there was only one rehabilitation centre (The Omari Project) that offered its services free of charge. The remaining 4 (four) either charged subsidized or market rate levies for services rendered.

Available information during fieldwork showed that the cost of services ranged between Kshs 150.00 to Kshs 500.00 per day for a client. The cost becomes high given that most clients are required to stay for not less than three months in the centres. Nonetheless, as results in Table 4.32 confirm, a large proportion of heroin users (45.8%) perceive the costs as affordable in contrast to over 30% of them who perceived the cost to be prohibitive. Apparently, the finding on affordability of charges in some of the centres corroborates field observation that some of these centres services are subsidised by local Non-Governmental Organizations (NGOs).

Table 4.32: Perception of rehabilitation charges

Rating of Charges	Frequency	Percent
Very expensive	32	8.4
Expensive	83	21.7
Reasonable	95	24.9
Cheap	80	20.9
No Charges	39	10.2
No opinion	53	13.9
Total	382	100.0

Noticeably, the large percentage (30.1%) of those who reported that charges were either expensive or very expensive can probably be explained by the existence of private heroin rehabilitation centres such as “Reach Out”, which charge market rates for their services.

(iv) Perceived client-counsellor relationships

The quality of interaction between heroin users and their counsellors is significant in the whole process of rehabilitation. The clients and counsellors are expected to have positive relationships for successful rehabilitation. Successful rehabilitation of heroin users does not only rely on the relationship of the clients towards their counsellors but also that of the counsellors towards them. In fact, rehabilitation should be considered as a two-way traffic, where at some point the counsellor guides the whole process while the addict takes an active part in his or her own road to recovery. More specifically, the processes of guidance and taking up of an active role in the recovery by counsellors and clients respectively require positive attitudinal reciprocity. Table 4.33 captures these relationships.

Table 4.33: Assessment of relationships between clients and counsellors.

Rating	Client-Counsellor		Counsellor-Client	
	<i>No. of Informants</i>	<i>Percent</i>	<i>No. of Informants</i>	<i>Percent</i>
Very good	67	18.0	80	20.8
Good	171	45.8	148	38.5
Fair	76	20.4	72	18.8
Poor	13	3.5	21	5.5
Very poor	02	0.5	07	1.8
No opinion	44	11.8	56	14.6
Total	373	100.0	384	100.0

From Table 4.33, it is evident that an overwhelming majority (63.8%) of the sampled users perceived their relationship with counsellors to be either good or very good. On the otherhand, a slightly lower proportion of the informants (59.3%) felt that the counsellors had a good orientation towards them. Clients' strong positive rating of their relationship with counsellors is underscored by field observation, which confirmed that most of them are patient and committed to their recovery. Similarly, too much should not be read into the slightly lower

positive rating of counsellors by the clients since field experience also revealed that most of the counsellors were understanding and supportive of their clients.

F. HEROIN TREATMENT AND REHABILITATION SERVICES

In addition to being concerned with the pattern of heroin use, the study was also interested in investigating where heroin users sought remedies. Sources of treatment for heroin users as a variable were included to deepen our understanding of various rehabilitation strategies. Informants were asked to indicate where they sought help. Table 4.34 reflects on the answers obtained.

Table 4.34: Sources of help mentioned by heroin users

Sources	No. of Mentions	Percent
Medical institutions	482	44.2
Imprisoned for drugs	266	24.4
Rehabilitation centre	321	29.5
Psychiatric Unit	08	0.7
At home	01	0.1
Other	12	1.1
Total Mentions	1090	100.0

Obtained results in Table 4.34 show that slightly over two fifths of the informants sought help from medical institutions. Rehabilitation centres and imprisonment followed medical institutions as sources of help in that order. If we consider the 24.4% who reported that they were imprisoned, then the idea that users were getting inappropriate help was mentioned by almost 70% of the informants. This probably explains the high relapse rate of those heroin users who have attempted to quit the habit as captured in Chapter Six of this thesis.

An attempt was also made to find out the specific sources of rehabilitation that heroin users visit to get remedies for their addiction. Results of the analysis are captured in Table 4.35.

Table 4.35: Sources of rehabilitation mentioned by informants

Sources	Frequency	Percent
Prison	55	14.4
Omari heroin rehabilitation (Malindi)	52	13.6
MEWA rehabilitation (Mombasa)	26	6.8
Berohofband rehabilitation (Germany)	01	0.3
Teen Watch rehabilitation (Kwale)	10	2.6
Mombasa youth counseling centre	01	0.3
Tangana rehabilitation (Mombasa)	02	0.5
SINAM rehabilitation (Mombasa)	10	2.6
Reach out rehabilitation (Kilifi)	03	0.8
Didn't attend any rehabilitation facility	213	55.8
Other	10	2.6
Total Mentions	382	100.0

Results of the study in Table 4.35 show that over one half of the interviewed heroin users (55.8%) had not sought rehabilitation by the time of the study. This finding support casual observation made in the field that there were few heroin rehabilitation centres whose capacity could not also match the demand for rehabilitation services.

(i) Predisposition to seek professional help

Apart from being concerned with sources of help, the survey was also interested in investigating heroin users' willingness to seek help in form of detoxification and rehabilitation. Informants were therefore asked to rate their willingness to seek detoxification and rehabilitation. Obtained results in Table 4.36 reveal that slightly over three quarters of the informants (77.3%) were willing to seek detoxification. This finding corroborates field observation that most of the interviewed heroin users were emaciated and remorseful for their heroin use behaviour. More precisely, informants indicated readiness for any opportunity that would give them respite out of their heroin dependence.

Table 4.36: Willingness of heroin users to seek professional services

Ratings	Detoxification		Rehabilitation	
	Frequency	Percent	Frequency	Percent
Very Willing	149	38.8	198	51.6
Willing	148	38.6	133	34.6
Undecided	30	7.8	15	3.9
Unwilling	20	5.2	11	2.9
Stopped Using	07	1.8	07	1.8
No Response	30	7.8	20	5.2
Total	384	100.0	384	100.0

It is also reflected in Table 4.36 that slightly over four fifths of the informants (86.2%) were either willing or very willing to be rehabilitated. The finding on the higher percentage of those willing to be rehabilitated is a positive reflection. In fact, field observations confirmed that some heroin users' literary camp outside rehabilitation centres to seek admission despite notices that such centres are full. This can be explained by the fact that heroin use brings about physical and psychological dependencies, which are difficult to resolve without professional help.

(ii) Frequency of seeking help

The study also attempted to find out the number of times heroin users sought professional help for heroin related problems in the year predate the study (2003). Such help took the form of detoxification and/or rehabilitation. Obtained results in Table 4.37 show that there was a clear trend to not seek detoxification or rehabilitation and if these were done it was one (1) or two (2)

times in the year in question. It should be noted however that about 10% of the informants sought rehabilitation between 3-4 times.

Table 4.37: Frequency of seeking help in the year preceding the study (2003)

Rate Of Seeking Help	Detoxification		Rehabilitation	
	Frequenc y	Percent	Frequency	Percent
1-2 Times	102	27.4	142	37.0
3-4 Times	15	4.0	44	11.5
5-6 Times	01	0.3	02	0.5
7 (+) Times	03	0.8	03	0.8
Not Sought Help	251	67.4	193	50.3
Total	372	100.0	384	100.0

An attempt was also made to find out the frequency of seeking professional help during the year of the study (2004). Knowledge of heroin users' current pattern of predisposition to seek help would inform the study on the dynamics of seeking help among users. Obtained results on the frequency of seeking professional help are given in Table 4.38.

Table 4.38: Informants' rate of seeking professional help in 2004

Degree of Seeking help	Frequency	Percent
Very frequently	93	25.1
Frequently	149	40.3
Rarely	95	25.7
Very rarely	27	7.3
Stopped using	06	1.6
Total	370	100.0

Results in Table 4.38 reveal that slightly over three fifths of the informants (65.4%) sought professional help more often in the year 2004. This finding corroborates field observation that heroin users have a high predisposition to quit the habit. Indeed, qualitative data obtained through FGDs and Key informants' interviews confirm that heroin users would use any help available to them.

(iii) Heroin users' reactions to help obtained

The study also assessed the perceptions of the informants with regard to the detoxification and rehabilitation services offered in the available centres. It is clearly shown in Table 4.39 that one third of the informants considered detoxification in these facilities to be effective, while only about one fifth gave a contrary view. Table 4.39 also shows that those who did not seek detoxification were about two fifths.

Regarding rehabilitation a comparatively smaller proportion did not seek this service. Among those who sought rehabilitation a marked tendency was to give an ambivalent answer regarding the effectiveness of this service (34.9%). Those who reported that it was ineffective comprised about one fifths of the sample (23.2%). A little under one fifth of the informants were satisfied with rehabilitaion services. The finding that the bulk of heroin users' rated rehabilitation services to be of doubtful utility or not to be useful at all is consistent with high relapse rates that have been reported elsewhere for heroin users (Mwenesi 1995; Susan 1995) and Abdool et al 1998).

Table 4.39: Users' perception of professional help

Rating	Detoxification		Rehabilitation	
	Frequency	Percent	Frequency	Percent
Effective	127	33.1	69	18.0
Not Effective	83	21.6	89	23.2
Undecided	0	0.0	134	34.9
Not Detoxed	163	42.4	92	24.0
No opinion	11	2.9	0	0.0
Total	384	100.0	384	100.0

Indeed, the ambivalence in the rating of professional help among informants, as shown in Table 4.39, is corroborated by information from FGDs and key informants interviews in Chapter Six that indicated re-registration of an increasing number of relapsed heroin users.

G. FACTORS INFLUENCING USE OF REHABILITATION CENTRES

In addition to being concerned with the sources and pattern of seeking professional help, the study was also interested in finding out key factors affecting heroin users' decision to use a particular rehabilitation centre. Factors influencing decision to use rehabilitation centres were included in the study to deepen our understanding on the quality of the centres and their programmes. Heroin users were asked to indicate the degree to which certain selected facility-specific factors would influence their decision to use a particular rehabilitation institution. Table 4.40 reflects on the responses obtained.

Table 4.40: Factors related to use of rehabilitation centres (%)

Factors	Rating					N
	V. Much	Much	Not Much	Not at All	No Opinion	
Success of detoxification	49.5	29.6	7.7	0.8	12.4	372
Wellness after detoxification	35.0	40.4	7.8	4.4	12.4	371
Affordability of Charges	41.0	29.8	11.8	4.4	13.0	363
Quality of meals	32.8	39.0	14.1	1.6	12.5	369
Adequacy of meals	31.0	36.2	17.2	3.0	12.6	365
Client-Counselor relationship	22.8	44.0	16.3	4.1	12.8	368
Counselor-client relationship	26.6	40.2	14.4	6.0	12.8	368

Results in Table 4.40 show that about four fifths of the informants mentioned success of detoxification to have influenced their decision to use a particular rehabilitation centre. This finding concurs with those of Glatt (1969), Mwenesi (1995), Abdool (1998) and Susan (1995) who observed that rehabilitation starts with neutralizing the toxicity of the drug of abuse through detoxification process. Thus, success of anti-heroin therapy makes users to utilize a rehabilitation centre because it makes them confident that their dependence would be addressed effectively.

A component of success of detoxification is how well heroin users feel after receiving anti-heroin therapy. The way users feel after the remedy has ramifications on the decision to use a particular centre. Obtained results indicate that three quarters of the informants would have their decisions to use a rehabilitation centre influenced by the way they felt after detoxification. This is because anti-heroin therapy gives them relief from physical and psychological dependence.

Table 4.40 also shows that affordability of user fees influenced decision to use a particular rehabilitation institution of about 70% of the informants who answered this question. This can be explained by the fact that most users were unemployed and lacked ability to pay for such services. In addition to detoxification and user charges, issues related to meals also play a significant role in influencing informants' decisions to use a particular rehabilitation institution. Obtained results, as shown in Table 4.40, indicate that adequacy and quality of meals influenced decision to use rehabilitation centres of 67.2% and 71.8% of the informants respectively. This finding on meals is important as it gives users psychological satisfaction that they have enough to eat and rejuvenate those physical potentials lost due to heroin addiction.

Apart from being concerned with tangible factors affecting users' decision to use rehabilitation services, the study was also interested in investigating the impact of client-counselor relationships on the use of centres. Obtained results in Table 4.40 show that a similar number of informants (66.8%) reported that their decisions to use a particular rehabilitation facility were influenced by client-counselor and counselor-client relationships. Informants were attracted to centers with positive client-counselor relationships because this made them confident that their dependence problems would be optimally explored in a more friendly and understanding way.

H. MEASURES SUGGESTED IN IMPROVING SERVICES OF REHABILITATION CENTRES

In addition to being concerned with the factors related to utilization of heroin rehabilitation centres, the study was also interested in finding out measures that users would like to see instituted to improve services offered to them. Heroin users' suggestions to improve

rehabilitation services were incorporated in the study to broaden our understanding of the various approaches to improve rehabilitation strategies.

Informants were asked to suggest measures that could be used to improve the quality of services offered in the sampled heroin rehabilitation centres. Obtained responses to this question are presented in Table 4.41.

Table 4.41: Informants suggestions to improve rehabilitation services

Suggestions	No of mentions	Percent
Provide spiritual education/counseling	112	15.7
Provide adequacy and quality of Meals	73	10.2
Make user charges to be affordable	25	3.5
Improve quality of detoxification and rehabilitation	368	51.5
Enhance security in the the centres	20	2.8
Provision of follow up services	54	7.6
Others	62	8.7
Total Mentions	714	100.0

Obtained results in the table show that there was a clear trend among the informants to emphasize on improvement of treatment and rehabilitation services. This can probably be explained by the high relapse rate for those who have attempted rehabilitation as reported in Chapter Six of this work. Thus, informants would like to see the quality of detoxification and rehabilitation enhanced to boost their confidence in the effectiveness of the services offered in the studied rehabilitation centres.

I. MEASURES TO INTEGRATE HEROIN USERS IN THE COMMUNITY

In addition to being concerned with the measures that users would like to see instituted to improve rehabilitation services, the study was also interested in finding out those things that users would like to see implemented for their effective reintegration. Accordingly, informants were asked to suggest measures that could be implemented to improve their reintegration into the community. Table 4.42 carries the findings of the study.

Table 4.42: Informants suggestions to social reintegration

Measures	No. of Mentions	Percent
Provision of quality treatment and rehabilitation	250	36.1
Provision of employment to recovering users	179	25.9
Provision of guidance and counseling services	212	30.6
Improve police surveillance in heroin use areas	25	3.6
Others	22	3.2
Don't know	04	0.6
Total Mentions	692	100.0

Obtained results in Table 4.42 show that there was a clear pattern among the informants to mention enhancement of treatment and rehabilitation, provision of guidance and counseling and employment services, in that order, for improved social integration of users. These suggested measures are in line with three major findings of the study. First, qualitative data in Chapter Six point to the need for improved treatment and rehabilitation due to high relapse rate of users undergoing rehabilitation in the studied sites. Second, earlier findings of the study, in Table 4.6, showed that most users are either unemployed or involved in unstable occupations due to high unemployment rate in the country. Finally, heroin users lack information and guidance because they are victims of a school curricula that does not address drug use and abuse. The next chapter discusses the correlates of frequency of heroin use and predisposition to seek professional help using Chi-square and logistic regression analyses.

CHAPTER FIVE

CORRELATES OF HEROIN USE AND PREDISPOSITION TO SEEK HELP

In this chapter the indices of association among the major variables in the study are computed and interpreted using inferential statistical techniques. Importantly, the analysis of data in the chapter is guided by two major concerns. The first is to identify factors that significantly influence frequency of heroin use and second is to isolate those factors that affect the predisposition of heroin users to seek professional help.

Accordingly, the determinant factors to be explored here are socio-economic and demographic characteristics as well as environmental and facility-specific factors. Imperatively, the analysis of the facility-specific factors will broaden our understanding of the effectiveness of the sampled heroin rehabilitation centres.

To determine the magnitude, and in a number of cases the direction, of the association cross-tabulations were done. To be able to construct meaningful cross-tabulations and binary logistic regression analysis the key variables were further transformed into categorical variables. The transformation was done through assignment of scores to depict, for instance, “1” presence or “2” absence of the property being measured.

Bivariate analysis of factors influencing heroin use and predisposition to seek help

This study utilized various statistical techniques to provide an understanding of the relationships between the independent and dependent variables. First, Cross-tabulations and Chi-square (X^2) statistic for the test of significance (i.e. goodness of fit) were used. In the interpretation of the direction of association and to facilitate comparisons across categories percentages were used. The rationale behind this is that the Chi-square (X^2) statistic only tests the significance of an association without saying anything about its direction. More so, this thesis

uses the Contingency Coefficient (C) to provide a measure of association between the tested variables. The rationale behind this is that Contingency Coefficient is appropriate for tables of any size (Mangal 1990:169). The value of (C) is given by the formula:

$$C = \sqrt{\frac{X^2}{n + X^2}}$$

Where “n” is the sample size and X^2 is the Chi - square value. Like γ or phi and other coefficients of correlation, C has no limit (i.e. ± 1). Its upper limit is dependent upon the number of categories (i.e. the size of the table). Like Chi – square (X^2), it does not have negative values (see Mangal 1990:183, Shauri 2000). For a table made up of an equal number of columns and rows, K x K, the upper limit of the Contingency Coefficient is given by the formula:

$$C \text{ (upper limit)} = \sqrt{(K - 1) / K}$$

However, when the number of columns and rows differ, like 2 x 4 or 2 x 5, to calculate the upper limit, the smaller number is taken as K. Thus, in this study the upper limit for the value of C was 0.8¹¹.

Since the study has two dependent variables, the present section is divided into two parts. Part one contains Cross-tabulations and Chi-square analysis results of the independent variables and frequency of heroin use. Part two presents Cross-tabulations and Chi-square analysis results of factors affecting the predisposition of heroin users to seek professional help. The two sections conclude with a regression analysis of factors that predict frequency of heroin use and

¹¹ Table 5.18 has the highest value of Contingency Coefficient (C=0.8) in this thesis. This represent the highest limit for testing associations in this work.

predisposition to seek professional help respectively. Notably, all the analyses in this thesis were done using the Statistical Package for Social Sciences (SPSS), while all the relationships were tested at 95% level of confidence.

A. Factors influencing frequency of heroin use

It will be recalled that a major interest of this study was to find out whether demographic, socio-economic and environmental factors have a significant bearing on the frequency of heroin use. Accordingly, the users' demographic characteristics considered for analysis were sex, age and marital status. Socio-economic factors were educational attainment, occupation and income; while environmental factors included family stability, availability and affordability of heroin and peer influence. In the section that follows we first pay attention to the relationship between demographic characteristics and frequency of heroin use.

1. Demographic characteristics and frequency of heroin use

(a) Sex

Sex is one of the demographic factors considered to have a significant association with frequency of heroin use. Results of the study showed (in Chapter Four) that almost all (90.9%) interviewed heroin users were male, while only 9.1% were female. This finding supported the results of NIDA (2001:42) that males account for the larger majority of heroin users. Indeed, NIDA reports that among the heroin-related addicts, males accounted for 78% and 87% in 2000 in San Diego and San Francisco respectively; in Texas males accounted for 82% in 1999. Table 5.1 shows the influence of sex on frequency of heroin use among informants in this study.

Table 5.1: Sex by frequency of heroin use

Sex	Frequency of Use			
	<i>High {3(+)} times daily</i>	<i>Medium {1-2} times daily</i>	<i>Low {use when available}</i>	Total
Male	(245)* 70.6%	(86) 24.8%	(16) 4.6%	(347) 100.0%
Female	(31) 88.6%	(4) 11.4%	(0) .0%	(35) 100.0%
Total	(276) 72.3%	(90) 23.6%	(16) 4.2%	(382) 100.0%

* Figures in parenthesis are observed values. $X^2 = 5.441$, $df = 2$, Not Significant (NS), $C = 0.12$

Results in Table 5.1 clearly indicate that an overwhelming majority of males used heroin three to more than four times daily compared to those who used heroin 1-2 times or those who used heroin when it was available. Similarly, distinctly more females used heroin three (3) or more times daily than those who used it 1-2 times or less. Consequently, the study findings suggest that high frequency of heroin use occurs among males.

Nevertheless, the relationship between sex and frequency of heroin use was not statistically significant. The association between sex and frequency of heroin use was also found to be weak as indicated by the value of the Contingency Coefficient (C). The study findings show that sex does not significantly influence heroin use, with both men and women abusing heroin more frequently.

The high frequency of heroin use among men and women supports NIDA (2001:34) assertion that heroin use is up and that the scope and characteristics of individual users continue to broaden. This is explained by the fact that heroin users' become dependent on the drug quicker than is the experience with other drugs of abuse. Dependence means that the user feels a compulsion to take heroin on a regular basis to experience its effects and avoid the discomfort of its absence.

(b) Age

Age is indicated by the actual number of years of heroin users at the time of the interview from their first birthday. To enable meaningful comparisons using Cross-tabulations and Chi-square analysis the ages of the informants were put into cohorts. These age cohorts place informants into distinct age generations. Age cohorts define the peers one interacts with, which engenders common experiences including heroin use. Apparently, the age bracket of almost all sampled heroin users (98.1%), as revealed in Chapter Four, ranged between 15 and 45 years. This finding confirms NIDA (2001) and NACADA (2002) that heroin users are youthful, in addition to the demographic fact that Kenya is made up of a youthful population. The relationship between age and frequency of heroin use is captured in Table 5.2.

Table 5.2: Age by frequency of heroin use

Age cohorts in years	Frequency of Heroin Use			Total
	<i>High {3 +} times daily</i>	<i>Medium {1-2} times daily</i>	<i>Low {use when available}</i>	
15-29	(168)* 74.7%	(48) 21.3%	(9) 4.0%	(225) 100.0%
30-39	(80) 69.6%	(29) 25.2%	(6) 5.2%	(115) 100.0%
40-45	(21) 60.0%	(13) 37.1%	(1) 2.9%	(35) 100.0%
Total	(269) 71.7%	(90) 24.0%	(16) 4.3%	(375) 100.0%

$X^2 = 4.718$. $df = 4$. Not Significant. $C = 0.11$

Results in Table 5.2 reveal that a majority of the sampled heroin users aged less than 30 years used heroin three or more times a day. Similarly, in the 30-39-age cohort most heroin users' registered a high frequency of use. However, those aged 40 to 45 years reported a relatively low frequency of use. The findings suggest that frequency of heroin use is high among all the studied age cohorts. The results corroborate NIDA (2001) findings that heroin use is high

among the young and the old. Indeed, the average age of heroin users was 40.6 years in Hennepin County in 2000 and 38.1 years in Texas in 1999, while in San Francisco, heroin users had a median age of 40 years. Instructively, in this study the median age of sampled heroin users was 28 years.

The reported high frequency of heroin use among the various age brackets can be explained by the fact that when heroin is not taken, the users' suffers physiological and psychological discomforts. That is, if initially heroin is taken to induce a particular sensation, in latter stages the frequency of use is high to avoid suffering the unpleasant effects of its absence. Overall, however, the relationship between age and frequency of heroin use was not statistically significant and weak as indicated by the value of Contingency Coefficient (0.11). Instructively, the relationship is being cancelled by use at lower levels where frequency is reversed for the three (3) age cohorts. Nonetheless, the results suggest that the younger the age of informants the higher the frequency of use. The findings seems to corroborate findings from a study done in New Orleans that mortality rate due to heroin was largest in the 18-25 age cohort, with 26-34 registering a substantial proportion of mortality rate (NIDA 2001:39).

(c) Marital status

Marrital status is the final demographic variable to be considered for testing in this study. Marital status refers to the social recognition of having a spouse, being a widow or widower, divorced or separated. The variable is measured by the actual recognized marital status of the heroin users at the time of the interview. The variable is important because for those who are married being together evokes a sense of responsibility, which may be lacking to varying degress among those who are single, widowed, divorced or separated. In this regard, the variable was included to assess its effect on incidences of heroin use. To facilitate meaningful analysis, the

variable marital status was coded into three categories namely currently married, once married and unmarried.

Results for Cross-tabulations of marital status and incidences of heroin use appear in Table 5.3.

Table 5.3: Marital Status by frequency of heroin use

Marital Status	Frequency of Use			Total
	<i>High {3(+)} times daily</i>	<i>Medium {1-2} times daily</i>	<i>Low {use when available}</i>	
Unmarried	(173) 73.3%	(53) 22.5%	(10) 4.2%	(236) 100.0%
Married	(50) 69.4%	(18) 25.0%	(4) 5.6%	(72) 100.0%
Once Married	(53) 71.6%	(19) 25.7%	(2) 2.7%	(74) 100.0%
Total	(276) 72.3%	(90) 23.6%	(16) 4.2%	(382) 100.0%

$X^2 = 1.157$. $df = 4$ Not Significant $C = 0.06$

Table 5.3 shows that a high percentage of those interviewed who were single, married and once married used heroin three or more times daily. Table 5.3 shows that irrespective of marital status frequency of heroin use seems to be strikingly similar among informants in the three-marital status categories. It is instructive that the Chi-square value is extremely low and not statistically significant. The Contingency Coefficient shows that the relationship between marital status and frequency of heroin use is close to zero (0). In brief the findings suggest that marital status does not significantly influence the frequency of heroin use.

Having examined the relationship between demographic characteristics and frequency of heroin use we now turn to an examination of the link between frequency of heroin use and socio-economic factors. It will be recalled that components of socio-economic factors were educational attainment, occupational status and income.

2. Socio-economic variables and frequency of heroin use

(a) Educational attainment

Educational attainment was one of the socio-economic variables considered in the analysis of factors influencing frequency of heroin use. It is expected that people with higher educational attainment are more likely to make informed decisions on matters concerning their lives than their less educated counterparts. Indeed, education is an agent of socialization and hence impacts on one's attitude towards heroin use depending on the amount of education one has received. The variable educational attainment was measured by the actual number of years of schooling completed by the sampled informants. As reported in Table 4.5 over one half of the informants (55.3%) had completed between 1-8 years of schooling. Those with no formal education accounted for 5.2% of the informants. Thus, those with no formal education and those who had undergone 1-8 years of schooling accounted for the majority of the informants (60.5%). Informants with secondary school education were about 40%. Their high number among heroin users is a reflection of the restricted job opportunities in the country for people with this level of education.

Table 5.4 carries the findings on the association between level of education and the frequency of heroin use.

Table 5.4: Educational attainment by frequency of heroin use

Years of Schooling	Frequency of Use			Total
	<i>High {3 (+)} times daily</i>	<i>Medium {1-2} times daily}</i>	<i>Low {use when available}</i>	
None	(12) 60.0%	(8) 40.0%	(0) 0.0%	(20) 100.0%
1-8 years (Primary)	(169) 80.1%	(35) 16.6%	(7) 3.3%	(211) 100.0%
9 Years & above	(95) 62.9%	(47) 31.1%	(9) 6.0%	(151) 100.0%
Total	(276) 72.3%	(90) 23.6%	(16) 4.2%	(382) 100.0%

$X^2 = 16.702$.

df = 4.

$P < 0.002$

C = 0.21

According to the results in the table, frequency of heroin use varied with the years of schooling. Interestingly, most of the informants registered high frequency of heroin use in all the years of educational attainment. Nonetheless, there was a marked high use for informants with 1-8 years of schooling relative to the rest of their colleagues. As shown in the literature review in Chapter Two (see Susan 1995, Abdool et al 1998 and NIDA 2001), heroin produces very fast and strong dependency syndrome for users' explaining its high frequency of use for all the years of schooling shown in the table.

The relationship between years of schooling and frequency of heroin use was found to be statistically significant at 99% confidence level. Hence it can be concluded that level of educational attainment has a significant bearing on the frequency of heroin use.

(b) Occupational status

Descriptive data in Chapter Four has shown that heroin users belong to diverse occupational groups. These included those employed by government, private sector, civil society organizations and the self-employed. There were also the unemployed in the sample. The important assumption here is that occupational status determines the frequency of heroin use. It

is equally true though that heroin use can also lead to unemployment among the users. The occupational activities of the interviewed heroin users were categorized into four sub types viz the unemployed; salaried employees, self-employed and wage earners. The findings regarding the relationship between occupational status and frequency of heroin use are presented in Table 5.5.

Table 5.5: Occupational status by frequency of heroin use

Occupational Status	Frequency of Use			Total
	High {3 (+)} times daily	Medium {1-2} times daily	Low {when available}	
Salaried employees	(27) 56.3%	(13) 27.1%	(8) 16.7%	(48) 100.0%
Self employed	(17) 81.0%	(4) 19.0%	(0) 0.0%	(21) 100.0%
Wage earners	(104) 73.8%	(35) 24.8%	(2) 1.4%	(141) 100.0%
Unemployed	(128) 75.7%	(36) 21.3%	(5) 3.0%	(169) 100.0%
Total	(276) 72.8%	(88) 23.2%	(15) 4.0%	(379) 100.0%

$X^2 = 26.248.$

df = 6.

$P < 0.001.$

$C = 0.26$

The results indicate that though the frequency of heroin use is high across all occupational categories, it is much higher among the unemployed and wage earners. This is probably because the unemployed are idle throughout the day and hence easily influenced to use heroin as a way of passing time. Similarly, wage earners are likely to use heroin more frequently owing to the unstable nature of their occupations. Heroin use therefore may be a coping mechanism against stress and strains associated with the uncertainties of securing the next job for their livelihood.

Among all occupational categories frequency of heroin use while high (56.3%) was less for salaried employees. This may be due to the fact that this category of workers was responding to occupational stress. The pattern of incidences of heroin use that emerges is that all occupational categories use heroin more frequently, but the pattern is more entrenched among

the unemployed and wage earners. Indeed, Chi-square test results show a very significant relationship between occupational status and frequency of heroin use. This implies that occupational status significantly influence the frequency of heroin use.

(c) Income

Income was the last socio-economic variable considered for testing in this study. This variable was utilized to indicate heroin users' economic status. Notably, income is a critical measure of economic status but care was taken in interpreting the results of the relationship between income and frequency of heroin use. This caution was necessary because a person's economic status is a complex phenomenon and no one indicator can absolutely measure it.

Study findings in Chapter Four showed that income of heroin users ranged from those with no monthly income to above Kshs 10,000.00, with over one half (55.3%) earning less than Kshs 6,000.00 per month. This finding supports the income classification carried in the Economic Survey of 1998, which shows that most Kenyans fall in the low and medium income groups. The income sources of informants sampled in this study varied, ranging from self-employment activities, wage earning to salaried employment. Table 5.6 carries the findings of the association between heroin users' monthly income levels and frequency of heroin use.

Table 5.6: Monthly levels of income by intensity of heroin use

Income Levels	Intensity of Use			Total
	<i>High {3 (+)} times daily</i>	<i>Medium {1-2} times daily</i>	<i>Low {when available}</i>	
Up to Kshs 5000	(124) 68.5%	(50) 27.6%	(7) 3.9%	(181) 100.0%
Kshs 5001-10,000	(102) 73.9%	(30) 21.7%	(6) 4.3%	(138) 100.0%
Over Kshs 10,000	(50) 79.4%	(10) 15.9%	(3) 4.8%	(63) 100.0%
Total	(276) 72.3%	(90) 23.6%	(16) 4.2%	(382) 100.0%

$X^2 = 3.991$.

df = 4.

Not Significant

C = 0.10.

Results in Table 5.6, indicate, surprisingly, that all income categories registered high frequency of heroin use daily although there were clear variations. More precisely, the proportion of those involved in high use of heroin increased with income in a linear fashion. The results suggest that the higher the income level the higher will be the use of heroin. This is explained by the fact that heroin is an expensive drug and hence those with high income are more likely to acquire larger quantities of it for use.

Given the fact that heroin is an expensive drug, (as corroborated by a mean price of Kshs 149.60 per sachet as reported in Chapter Four of this study), the question that begs to be answered is how then are many users with low income sustaining their consumption of this substance. A number of reasons could explain this trend. First, field observations confirmed that heroin use was a group activity in which there was sharing with members of the “gang”. Indeed, as already reported in a previous chapter of this work almost one half (49.5%) of the informants used heroin in dens, a venue that facilitates sharing. This sharing becomes a point of concern given that 13.4% of the users in this study reported to be injecting heroin in their blood streams. Secondly, some of the low-income users most likely sustain this habit by resorting to anti-social behaviour as a means of securing the necessary monies to support their heroin use behaviour.

However, the chequered pattern of heroin use at the medium and low levels of intensity depresses the association between monthly income levels and frequency of heroin use. Instructively therefore, there is no significant relationship between income levels and frequency of heroin use ($X^2 = 3.991$ with 4 degrees of freedom).

3. Environmental factors in heroin use

Environmental factors were considered in relation to the frequency of heroin use amongst study informants. Environmental variables are important because their context has diverse

ramifications on our behaviour pattern, including use of drugs. As mentioned in the conceptual model, the study considered family stability, availability and affordability of heroin and peer pressure for testing the influence of social environment on heroin use.

(a) Family stability

Though social environment is a complex arena where different agents of socialization shape behaviour, the family is seen as the primary environment where an individual's learning takes place. Thus, the assumption is that an individual raised in an unstable family environment (where parents are not living together in a union) is likely to acquire certain deviant behaviour, including drug use. Alternatively, stable families are assumed to provide a suitable environment and models that young people can try to identify with in the struggle to define their own identities and behaviour in the community. Results already reported in Table 4.25 show that slightly over two thirds (65.2%) of the interviewed heroin users had parents who were living apart. Table 5.7 shows the relationship between family stability and frequency of heroin use.

Table 5.7: Family stability by heroin use

Status of Family	Frequency of Heroin Use			Total
	<i>High {3 (+)} times daily</i>	<i>Medium {1-2} times daily</i>	<i>Low {when available}</i>	
Parents living together	(98) 74.8%	(30) 22.9%	(3) 2.3%	(131) 100.0%
Parents not living together	(175) 71.1%	(59) 24.0%	(12) 4.9%	(246) 100.0%
Total	(273) 72.4%	(89) 23.6%	(15) 4.0%	(377) 100.0%

$X^2 = 1.640$. $df = 2$. Not Significant $C = 0.07$.

Results in Table 5.7 show that whether or not parents live together in a union, their children use heroin more or less with the same intensity. This implies that frequency of heroin use has nothing to do with parental control. Indeed, the craving for heroin is so strong that users will do anything within their disposal, including disobeying parental control, to imbibe the drug

for pleasure and avoid the discomfort associated with its absence (Susan 1995, Abdool et al 1998). These findings are corroborated by the Chi-Square test results, which show lack of a significant relationship between family stability and frequency of heroin use. This suggests that family stability or instability does not significantly influence frequency of heroin use.

(b) Availability of heroin

Availability of heroin is another environmental factor assumed to have a bearing on its frequency of use. The argument here is that where heroin is readily available it enhances its accessibility among the users triggering high frequency of use. In fact, this notion is contained in Mwenesi (1995) that drug availability and its spill over effects in an area becomes a consumer driven phenomenon. This study attempted to test the association between availability of heroin and frequency of its use to validate this assumption. Table 5.8 carries the results regarding this association.

Table 5.8: Availability of heroin by intensity of use

Availability of heroin	Intensity of Use			Total
	<i>High {3 (+)} times daily</i>	<i>Medium {1-2} times daily</i>	<i>Low {when available}</i>	
Available	(273) 73.6%	(86) 23.2%	(12) 3.2%	(371) 100.0%
Not available	(2) 50.0%	(2) 50.0%	(0) 0.0%	(4) 100.0%
Total	(275) 73.3%	(88) 23.5%	(12) 3.2%	(375) 100.0%

$X^2 = 1.643$. $df = 2$. Not Significant $C = 0.07$.

As can be seen in Table 5.8, heroin was available for 98.9% of the informants, which translates to virtually everybody in the sample. Given this lack of variance it was not possible to meaningfully test the hypothesis regarding availability of heroin and frequency of its use.

(c) Affordability of heroin

The inclusion of this variable in the analysis was mandated by the assertion that heroin is the most expensive drug worldwide (Susan 1995, Abdool et al 1998, NIDA 2001). Indeed, findings of the study (in Chapter Four) reveal a mean price of heroin of Kshs 149.60 per sachet within the studied sites. Considering the fact that a user may consume at least three or more sachets a day (Abdool et al 1998) and given that most users have no stable occupations (Table 4.6), the assumption is that affordability of heroin will influence frequency with which it is used. The variable affordability of heroin is measured by the actual cost of the drug per sachet in the studied sites. Accordingly, the two variables were tested using Chi-Square analysis. Table 5.9 present the association between cost of heroin per sachet by frequency of its use.

Table 5.9: Cost of heroin by frequency of its use

Cost of heroin	Frequency of Heroin Use			Total
	<i>High {3 (+)} times daily</i>	<i>Medium {1-2} times daily</i>	<i>Low {when available}</i>	
Kshs 0-50.00	(2) 28.6%	(4) 57.1%	(1) 14.3%	(7) 100.0%
Kshs 51-100	(119) 73.9%	(41) 25.5%	(1) 0.6%	(161) 100.0%
Over Kshs 100	(153) 74.3%	(43) 20.9%	(10) 4.9%	(206) 100.0%
Total	(274) 73.3%	(88) 23.5%	(12) 3.2%	(374) 100.0%

$X^2 = 13.957$. $df = 4$. $P < 0.007$. $C = 0.20$

Although those who can afford heroin at low cost were only seven (7), their relative poverty permitted five (5) of them (71.4%) to use the drug when available or between 1-2 times daily. Contrastingly, those who could afford to purchase it at Kshs 51.00 to Kshs 100.00 behaved in most similar fashion to those who could afford it at over Kshs 100.00, which was to use heroin more frequently (three or more times daily). This meant that above the Kshs 50.00 threshold the cost of heroin per sachet was less important in the frequency of its use among informants.

Indeed, in spite of the tendency to prefer medium frequency of heroin use among those informants who reported heroin to cost Kshs 50.00 or less per sachet, overall findings suggest a general trend where high cost of heroin is equated to high frequency of its use thus justifying its high cost. Accordingly, the infrequent users at the low cost scale and the frequent users at the high cost scale yielded a very significant relationship between the two variables, implying that cost of heroin significantly influence frequency of its use.

(d) Peer influence

Another social environmental factor considered in this study is peer influence in relation to frequency of heroin use. Peer influence in this study refers to frequency of heroin use as a mobilised social (group) activity. Ideally, members of any collectivity, including heroin use groups, have common sub-culture, language and behavioural tendencies redolent of the solidarity in which they are members. Previous studies of drug abuse, as documented in Chapter Two of this study, associated peer influence with drug use. Results reported in this study reaffirmed the influence of peer pressure in the frequency of heroin use. About 89% of the informants admitted that they frequently use heroin in the company of friends. Table 5.10 in fact confirms a significant relationship between peer influence and frequency of heroin use ($X^2 = 148.290$; $P < 0.001$). The relationship between peer influence and frequency of heroin use was also found to be very strong as indicated by the value of contingency coefficient ($C = 0.53$).

Table 5.10: Peer Influence by frequency of heroin use

Frequency of use with peers	Frequency of Heroin Use			Total
	High {3(+)} times daily	Medium {1-2} times daily	Low {when available}	
1-2 times daily	(41) 42.3%	(55) 56.7%	(1) 1.0%	(97) 100.0%
Over 2 times	(191) 92.3%	(15) 7.2%	(1) .5%	(207) 100.0%
None	(38) 56.7%	(15) 22.4%	(14) 20.9%	(67) 100.0%
Total	(270) 72.8%	(85) 22.9%	(16) 4.3%	(371) 100.0%

$X^2 = 148.290$. $df = 4$. $P < 0.001$. $C = 0.53$

Thus, cross tabulation of frequency of use of heroin with peers and frequency of heroin use indicates that a relatively high proportion of informants who reported using heroin over two times with friends did use heroin three or more times daily. Those who reported using heroin moderately with friends (1-2 times daily) also reported moderate frequency of use on a daily basis (1-2 times daily). In spite of the tendency to prefer medium frequency of heroin use among those informants who reported using heroin with friends 1-2 times daily, overall findings suggest a general trend where those who used it alone and more than twice daily with friends registered a high frequency of use. Overall, the results reported here suggest that peer influence significantly accounts for the frequency of heroin use in the study area and that the association is strong.

Concluding observations

The analysis undertaken in this chapter, so far, confirms that of the ten independent variables the study considered, only four significantly influenced heroin use. These are number of years completed in school, occupational status, peer influence and affordability of heroin. Coincidentally, two of these factors are socio-economic and the other two are environmental. On the basis of the strength of the relationships between the independent and dependent variables, it

is apparent that out of the ten factors considered, peer influence is the most strongly related to frequency of heroin use. A more systematic analysis of the relationships with regard to strength and direction of various factors and frequency of heroin use are presented later using logistic regression.

B. Factors Influencing Heroin Users' Predisposition to Seek Help

This study investigated whether some selected demographic, socio-economic, environmental and facility specific factors have a bearing on the predisposition of heroin users to seek professional help. The variable predisposition to seek professional help was measured by how frequently heroin users sought assistance for heroin related psychosocial problems in the studied rehabilitation centres. To reiterate, factors considered to have an influence on informants predisposition to seek professional help in this work were demographic, socio-economic, environmental and facility specific. Only those components of these variables that were strongly related to inclination to seek help are reported. These are discussed sequentially in the sections that follow.

1. Demographic Factors

Age and marital status of heroin users were the demographic factors considered for Chi-Square analysis in regard to predisposition to seek help in this study, leaving out gender on the premise that there are no rehabilitation facilities specifically designed for women in the study area. However, gender as a factor will be included as a covariate in the logistic regression analysis later in the chapter.

(a) Age

The relationship between age and heroin users' willingness to seek professional help is critical in developing age specific intervention programmes for heroin users. Cross tabulation of age and predisposition to seek professional help is presented in Table 5.11.

Table 5.11: Age by predisposition to seek professional help

Age Groups	Frequency of Seeking Professional Help			Total
	<i>High {3(+)}</i> times	<i>Medium (1-2)</i> times	<i>Low (Not sought)</i>	
Up to 29 Years	(79) 35.1%	(23) 10.2%	(123) 54.7%	(225) 100.0%
30-39 Years	(46) 39.7%	(15) 12.9%	(55) 47.4%	(116) 100.0%
Over 39 Years	(15) 41.7%	(9) 25.0%	(12) 33.3%	(36) 100.0%
Total	(140) 37.1%	(47) 12.5%	(190) 50.4%	(377) 100.0%

$X^2 = 9.210$. $df = 4$. $P < 0.056$. $C = 0.15$

It is clear from Table 5.11 that a relatively high proportion of those aged up to 29 years did not seek professional help. In the 30-39 years age cohort, the proportion of those who did not seek help is slightly higher than that which sought help three or more times. But for those aged more than 39 years, the proportion of those who sought professional help three or more times was higher than those who sought help 1-2 times and those who did not seek help at all.

Though there was a minimal variation in seeking professional help among interviewed heroin users, the pattern of not seeking professional help among the youth (up to 29 and 30-39 years) was much higher. As expected, the majority of those over 39 years sought professional help. These might be those heroin users who were tired with the habit and were serious about looking for help to quit compared to the youth who might still be having fun. The observed pattern of high frequency of seeking help among those aged over 39 years yields no statistically significant relationship. This suggests that respondents' age does not significantly influence

heroin users' predisposition to seek professional help. However, the pattern is adequately distinct to make age an important issue in seeking professional help.

(b) Marital status

Another demographic factor considered for Chi-Square test in this section is marital status. This is an important variable because spouse influence regarding seeking professional help for anti-heroin therapy is only to be expected, where such a spouse is a non-user. The association between heroin users' marital status and predisposition to seek professional help is presented in Table 5.12.

Table 5.12: Marital status by predisposition to seek professional help

Marital Status	Frequency of Seeking Professional Help			Total
	<i>High {3(+)}</i> times	<i>Medium (1-2)</i> times	<i>Low (Not sought)</i>	
Single	(81) 34.2%	(25) 10.5%	(131) 55.3%	(237) 100.0%
Once married	(24) 32.0%	(15) 20.0%	(36) 48.0%	(75) 100.0%
Married	(37) 51.4%	(9) 12.5%	(26) 36.1%	(72) 100.0%
Total	(142) 37.0%	(49) 12.8%	(193) 50.3%	(384) 100.0%

$X^2 = 13.171$. $df = 4$. $P < 0.01$. $C = 0.20$

From the table, it is evident that a large proportion of heroin users who were single and once married did not seek professional help. In contrast, majority of the heroin users who were in marital unions sought professional help for their heroin related psychosocial problems. This finding suggests that a stable marital union facilitates the inclination or readiness to seek professional help. This may be attributed to spousal influence for behavioural reform in a bid to protect the marriage. The married heroin users may also be more willing to be rehabilitated so that they can take up their responsibilities in the home that they have lost due to their drug abuse behaviour. The Chi-Square test reveals a very significant statistical association between marital

status and predisposition to seek professional help. In other words, marital status has a significant influence on heroin users' predisposition to seek professional help.

2. Socio-Economic Factors

Occupational status and income were the socio-economic factors to determine their influence on heroin users' predisposition to seek professional help. Since Years of schooling have an effect on both occupational status and an individual's income, the variable will be used as a control factor in the regression analysis to ascertain if the relationship between occupational status and income on users' predisposition to seek help are spurious. The link between these two socio-economic factors and users' predisposition to seek help is examined next.

(a) Influence of occupational status

Given the fact that some rehabilitation centres charge user fees, it was deemed appropriate to ascertain the relationship between occupational status and predisposition to seek professional help. Indeed, employment status may be the source of income to finance rehabilitation costs. The relationship between occupational status and predisposition to seek professional help is presented in Table 5.13.

Table 5.13: Occupational status by predisposition to seek professional help

Occupational Status	Frequency of Seeking Help			Total
	High {3(+)} times	Medium (1-2) times	Low (Not sought)	
Salaried employment	(29) 60.4%	(3) 6.3%	(16) 33.3%	(48) 100.0%
Self employed	(7) 33.3%	(2) 9.5%	(12) 57.1%	(21) 100.0%
Wage earners	(45) 31.9%	(23) 16.3%	(73) 51.8%	(141) 100.0%
Unemployed	(60) 35.1%	(21) 12.3%	(90) 52.6%	(171) 100.0%
Total	(141) 37.0%	(49) 12.9%	(191) 50.1%	(381) 100.0%

$X^2 = 14.703.$

df = 6.

P < 0.05.

C = 0.20

As expected, a large proportion of the salaried employees reported a high frequency of seeking professional help. A number of reasons can explain this pattern of seeking professional help among this group of heroin users. First, those in salaried employment can afford to pay for the services of the rehabilitation centres. Second, their high frequency of seeking professional help can be explained by a desire to drop the habit so that they do not jeopardize their jobs. Indeed, drug abuse has been reported to lead to loss of jobs (UNDCP 1998).

Table 5.13 also shows that over 50% of those who are self-employed, wage earners and the unemployed rarely sought professional help for their heroin related problems. This trend of low frequency of seeking professional help among these categories of heroin users may be explained by lack of money to finance rehabilitation costs given their unstable careers or unemployment status.

The relationship between occupational status and heroin users predisposition to seek professional help was found to be statistically significant at 95% confidence level. Thus, occupational status significantly influences heroin users predisposition to seek professional help. However, the relationship between the two variables is weak as indicated by the value of contingency coefficient.

(b) The role of income

As will be recalled, another socio-economic factor considered to have a bearing on heroin users predisposition to seek professional help was income. This variable is important because there is some cost involved in seeking and getting professional help. This cost may include transportation, meals, consultations and even user fees. In fact, its only Omari Rehabilitation Project in Malindi, that offers free heroin services to patrons. Significantly therefore, the study

wanted to assess the role of heroin users income and their predisposition to seek professional help. The relationship between the two variables is presented in Table 5.14.

Table 5.14: Income by predisposition to seek professional help

Monthly Income Level	Frequency of Seeking Help			Total
	<i>High {3(+)}</i> times	<i>Medium (1-2)</i> times	<i>Low (Not sought)</i>	
Kshs 5000 & Below	(52) 28.6%	(34) 18.7%	(96) 52.7%	(182) 100.0%
Kshs 5001-10,000	(56) 40.3%	(10) 7.2%	(73) 52.5%	(139) 100.0%
Over Kshs 10,000	(34) 54.0%	(5) 7.9%	(24) 38.1%	(63) 100.0%
Total	(142) 37.0%	(49) 12.8%	(193) 50.3%	(384) 100.0%

$X^2 = 20.552$. $df = 4$. $P < 0.001$. $C = 0.23$

Income appears to influence the frequency of seeking professional help, with those informants at the highest income bracket shown in Table 5.14 seeking help more frequently. This trend may be explained by the fact that such users are not only able to afford consultation, meals and transportation costs but also charges levied for heroin treatment rendered in some of the studied rehabilitation centres. Conversely, those with incomes at Kshs 10,000.00 and below per month rarely sought help. Interestingly, the Chi-Square test is significant at 99% confidence level, even if the contingency coefficient is low. This finding confirms that monthly income has a positive significant influence on heroin users predisposition to seek professional help.

3. Environmental Factors

Selected environmental factors were considered in the assessment of factors predisposing heroin users to seek professional help. The assumption here is that some environmental factors like cost of heroin and peer influence may act as push factors for heroin users to seek professional assistance to forgo the habit. The role of these two factors is examined in the next section.

(a) Affordability of heroin

Cost of heroin determines its affordability. Affordability of heroin as a variable was measured by the actual cost of heroin per sachet. The expectation was that since heroin is an expensive drug, its cost is likely to be a barrier to using it. As such users who face this situation may be willing to seek professional help regarding dropping the habit. Results in Table 5.15 indicate the relationship between actual cost of heroin and predisposition to seek help among informants in this study.

Table 5.15: Cost of heroin by predisposition to seek professional help

Cost of Heroin per Sachet	Frequency of Seeking Help			Total
	High {3(+)} times	Medium (1-2) times	Low (Not sought)	
Kshs 50 and Below	(1) 14.3%	(0) 0.0%	(6) 85.7%	(7) 100.0%
Kshs 51-100	(42) 25.9%	(29) 17.9%	(91) 56.2%	(162) 100.0%
Over Kshs 100	(98) 47.3%	(19) 9.2%	(90) 43.5%	(207) 100.0%
Total	(141) 37.5%	(48) 12.8%	(187) 49.7%	(376) 100.0%

$X^2 = 23.269$. $df = 4$. $P < 0.001$. $C = 0.24$

Results in Table 5.15 show that those who obtained heroin cheaply had little reason to seek professional help. In contrast, those for whom heroin was expensive were more inclined to seek frequent help. This may be because such heroin users cannot only afford the drug of abuse but also the rehabilitation costs involved.

However, the general emerging pattern of predisposition to seek professional helps in this study points to increasing cost of heroin. That is the higher the financial cost of heroin the higher the predisposition to seek professional help. In fact, this pattern is supported by Chi-Square test, which revealed that affordability of heroin significantly influences users predisposition to seek professional help at the 0.001 level of significance.

(b) Peer influence

Peer influence was another environmental factor thought to have an influence on the predisposition of heroin users to seek professional help. Peer influence was measured by the frequency of heroin use as a group activity. The variable was important because peer groups are critical agents of socialization. Indeed, they shape members attitudes towards various social phenomena, including inculcating positive or negative attitudes towards drug use. The relationship between peer influence and predisposition to seek professional help is presented in Table 5.16.

Table 5.16: Peer influence by predisposition to seek professional help

Frequency of Group Use	Frequency of Seeking Help			Total
	<i>High {3(+)}</i> times	<i>Medium (1-2)</i> times	<i>Low (Not sought)</i>	
None**	(18) 26.5%	(11) 16.2%	(39) 57.4%	(68) 100.0%
1-2 times daily	(35) 35.7%	(6) 6.1%	(57) 58.2%	(98) 100.0%
Over 2 times daily	(85) 41.1%	(29) 14.0%	(93) 44.9%	(207) 100.0%
Total	(138) 37.0%	(46) 12.3%	(189) 50.7%	(373) 100.0%

** Use alone or stopped using. $X^2 = 10.389$. $df = 4$. $P < 0.05$. $C = 0.17$.

Table 5.16 reveals that a higher proportion of those who used heroin with friends 1-2 times and over two times daily sought little professional help; similarly for the heroin users who reported that they used heroin alone or had dropped the habit. The higher percentage of those who used heroin with friends and sought little help may be explained by heroin peer group sub-culture, which exerts pressure on members for compliance. In most cases non-use of the drug or abstaining is seen as a violation of group norms and members will try to influence the recovering heroin addict to relapse. Indeed, the Chi-Square test confirms that peer pressure significantly influences heroin users predisposition to seek professional help.

The emerging pattern of low frequency of seeking professional help among heroin users is a true reflection of the situation on the ground. Field experience attributes this not to ignorance and apathy among heroin users but to lack of capacity in the existing rehabilitation centres to take more patrons.

4. Facility-Specific Factors

This section examines the influence of certain factors within rehabilitation centres on the predisposition of heroin users to seek professional help. The expectation here is that certain rehabilitation centre attributes can influence the predisposition of heroin users to seek professional help. The facility specific-factors considered in this study were perceived success of detoxification, charges levied, quality and adequacy of meals, as well as counsellor-client and client-counsellor relationships. Each of these factors is examined in the sections that follow.

(a) Success of detoxification

To begin with, it is important to note that heroin rehabilitation starts with detoxification. This is essentially an anti-heroin therapy aimed at neutralizing the toxicity of heroin in the users body and relieving them of the withdrawal symptoms associated with the drug. How heroin users perceive the success of detoxification is therefore considered a critical factor in determining their predisposition to seek professional help from certain rehabilitation centres. The variable success of detoxification is measured by the degree of confidence heroin users have with the efficacy of the anti-heroin therapy they receive. The relationship between success of detoxification and predisposition of heroin users to seek professional help is presented in Table 5.17.

Table 5.17: Success of detoxification by heroin users predisposition to seek help

Perceived Success of Therapy	Frequency of Seeking Help			Total
	High {3(+)} times	Medium (1-2) times	Low (Not sought)	
Successful	(83) 53.2%	(25) 16.0%	(48) 30.8%	(156) 100.0%
Satisfactory	(28) 30.8%	(13) 14.3%	(50) 54.9%	(91) 100.0%
Not Successful	(19) 41.3%	(7) 15.2%	(20) 43.5%	(46) 100.0%
No Opinion	(12) 13.6%	(4) 4.5%	(72) 81.8%	(88) 100.0%
Total	(142) 37.3%	(49) 12.9%	(190) 49.9%	(381) 100.0%

$X^2 = 61.609$.

df = 6.

$P < 0.001$.

$C = 0.37$

Trends reflected in Table 5.17 reveals an interesting pattern. As expected, a high proportion of those who reported that detoxification was successful registered high frequency of seeking help. Similarly, majority of those heroin users who revealed that success of detoxification was satisfactory, not successful and even those who could not rate it reported low frequency of seeking professional help. The results suggest that success of detoxification increases the likelihood of heroin users to seek professional help. In otherwords, those rehabilitation facilities perceived to have better detoxification would have more heroin users seeking help. The rationale for our view here is that such facilities are capable of effectively handling their withdrawal symptoms. The Chi-Square test shows that success of detoxification significantly influences heroin users predisposition to seek professional help ($P = 0.001$). The relationship between the two variables is also moderately strong as indicated by the value of Contingency Coefficient.

(b) Perception of charges

Perception of charges was another facility-specific factor considered regarding its influence on the predisposition of heroin users to seek help. The expectation of the study is that

levying charges in heroin rehabilitation centres will affect the users predisposition to seek professional help. The reason is simply that rehabilitation centres would be the preserve of those who can afford such charges. Table 5.18 shows the relationship between informants' perception of charges and their predisposition to seek professional help.

Table 5.18: Perception of charges by predisposition to seek professional help

Perceived Charges	Frequency of Seeking Help			Total
	<i>High {3(+)}</i> times	<i>Medium (1-2)</i> times	<i>Low (Not sought)</i>	
Expensive	(41) 35.7%	(10) 8.7%	(64) 55.7%	(115) 100.0%
Reasonable	(37) 38.9%	(21) 22.1%	(37) 38.9%	(95) 100.0%
Cheap	(39) 48.8%	(11) 13.8%	(30) 37.5%	(80) 100.0%
No Charges	(22) 56.4%	(6) 15.4%	(11) 28.2%	(39) 100.0%
Total	(139) 42.2%	(48) 14.6%	(142) 43.2%	(329) 100.0%

$X^2 = 17.716$ $df = 6.$ $P < 0.01.$ $C = 0.23.$

As expected, the results in the table indicate that majority of those who perceived user charges to be expensive registered low frequency of seeking professional help, while those who said charges are low reported high frequency of seeking help. Those heroin users who revealed that there were no charges levied in seeking professional help reported the highest frequency of seeking help. Interestingly, those who said that charges were reasonable registered equal proportions amongst those who frequently sought help and those who sought little or no help at all. This pattern of use represents a perception turning point between those who perceived charges to be expensive and those who said that charges are low.

The general pattern of seeking professional help conforms to expectations in the sense that the lower the charges (or free service) the higher the frequency of seeking help and vice versa. Indeed, Chi-Square shows a very significant relationship between perception of charges

and predisposition to seek professional help ($P = 0.01$). The relationship between the two variables is also slightly strong as indicated by the value of the Contingency Coefficient.

(c) Quality of meals

The variable quality of meals was used as one of the indicators of quality of services offered in the studied rehabilitation centres. In rehabilitation of heroin users, quality of meals is important in reversing the physical emaciation of the clients. This is because heroin abuse behaviour does not allow for proper dietary norms among the users. As a consequence the users become physically emaciated. Accordingly, this study tested whether perception of quality of meals influences heroin users predisposition to seek professional help. Results of cross-referencing these two variables are contained in Table 5.19.

Table 5.19: Perceived quality of meals by predisposition to seek professional help

Quality of Meals	Frequency of Seeking Help			Total
	High {3(+)} times	Medium (1-2) times	Low (Not sought)	
Good	(111) 40.5%	(39) 14.2%	(124) 45.3%	(274) 100.0%
Fair	(18) 56.3%	(5) 15.6%	(9) 28.1%	(32) 100.0%
Poor	(11) 45.8%	(3) 12.5%	(10) 41.7%	(24) 100.0%
Total	(140) 42.4%	(47) 14.2%	(143) 43.4%	(330) 100.0%

$X^2 = 3.795$. $df = 4$. Not Significant. $C = 0.11$

Interesting patterns of seeking professional help are emerging in Table 5.19. More precisely, the table shows a high proportion of those who perceived meals to be good reporting low frequency of seeking help, while most of those who revealed that their perception of meals was fair registering high frequency of seeking such help. More so, those reporting poor quality of meals in such centres are also registering high frequency of seeking professional help. The higher proportion of those reporting fair and poor quality of meals yet registering high frequency

of seeking help from such facilities may be explained by the lack of alternative means of rehabilitation in the studied sites. The Chi-Square analysis between perceived quality of meals and predisposition to seek professional help among heroin users was found to be insignificant.

(d) Adequacy of meals

This study recognizes the fact that the quality of a meal, which is inadequate, may not elicit the desired effects in rehabilitating heroin users. Thus, in rehabilitation work the meals provided should not only be of high quality but they should also suffice the recovering clients. It was on the basis of this that the present study sought to validate this notion using Chi-Square test. Findings of the relationship between perceived adequacy of meals and heroin users predisposition to seek professional help are contained in Table 5.20.

Table 5.20: Perception of adequacy of meals by predisposition to seek professional help

Adequacy of Meals	Frequency of Seeking Help			Total
	<i>High {3(+)} times</i>	<i>Medium (1-2) times</i>	<i>Low (Not Sought)</i>	
Adequate	(106) 41.2%	(37) 14.4%	(114) 44.4%	(257) 100.0%
Fair	(19) 39.6%	(7) 14.6%	(22) 45.8%	(48) 100.0%
Not adequate	(15) 60.0%	(3) 12.0%	(7) 28.0%	(25) 100.0%
Total	(140) 42.4%	(47) 14.2%	(143) 43.4%	(330) 100.0%

$X^2 = 3.580.$ $df = 4.$ Not Significant. $C = 0.10.$

Results in Table 5.20 show a surprising pattern of predisposition to seek professional help among informants. Indeed, it is shown in the table that a high proportion of those who perceived meals to be adequate sought little professional help, as is the case with those who perceived adequacy of meals to be fair. Contrastingly, a higher proportion of those who perceived meals to be inadequate registered high frequency of seeking such help. As revealed elsewhere in this thesis, those who reported meals to be inadequate and yet most of them sought frequent help

from such centres suggest the lack of alternative rehabilitation facilities in the study area. Indeed, NACADA, the organization mandated by Gazette Notice Number 2841 of 2001 to establish such centres has not been able to do so. The relationship between perceived adequacy of meals and predisposition of heroin users to seek professional help was also found to be statistically insignificant.

(e) Client-counsellor relationship

Client-counsellor relationship was another facility-specific factor considered to influence heroin users predisposition to seek professional help. It was the expectation of this study that the attitude of the patron towards the counsellors helps to achieve certain rehabilitation goals. In fact, a positive attitude towards counsellors is expected to help build a rapport useful in exploring the salient causes of heroin use among informants. The influence of client-counsellor relationship on heroin users predisposition to seek professional help is presented in Table 5.21.

Table 5.21: Perception of client-counsellor relationship by predisposition to seek help

Client-Counsellor Relationship	Frequency of Seeking Help			Total
	High {3(+)} times	Medium (1-2) times	Low (Not sought)	
Good	(101) 42.4%	(35) 14.7%	(102) 42.9%	(238) 100.0%
Fair	(28) 36.8%	(10) 13.2%	(38) 50.0%	(76) 100.0%
Poor	(10) 66.7%	(2) 13.3%	(3) 20.0%	(15) 100.0%
Total	(139) 42.2%	(47) 14.3%	(143) 43.5%	(329) 100.0%

$X^2 = 5.418$. $df = 4$ Not Significant. $C = 0.13$.

Table 5.21 shows a slight difference between informants who perceived client-counsellor relationship to be good and yet sought little help and those in the same category who sought professional help more frequently. As expected, most of those who reported client-counsellor relationship to be fair also registered low frequency of seeking professional help. The table also

shows that most informants who registered high frequency of seeking help perceived client-counsellor relationship to be poor. This can probably be explained by the desperation of users to quit the habit using any available help regardless of its quality. Chi-square analysis reveals an insignificant relationship between perceived client-counsellor relationship and heroin users predisposition to seek help.

(f) Counsellor-client relationship

This study also recognizes the fact that client-counsellor relationship alone is not enough for successful rehabilitation, if the attitudes of the counsellors towards informants are not favourable. Thus, successful rehabilitation calls for positive attitudinal reciprocity between counsellors and patrons. The association between counsellor-client relationship and heroin users predisposition to seek professional help is presented in Table 5.22.

Table 5.22: Perception of counsellor-client relationship by predisposition to seek help

Counsellor-Client Relationship	Frequency of Seeking Help			Total
	High {3(+)} times	Medium (1-2) times	Low (Not sought)	
Good	(95) 41.7%	(32) 14.0%	(101) 44.3%	(228) 100.0%
Fair	(29) 40.3%	(13) 18.1%	(30) 41.7%	(72) 100.0%
Poor	(15) 53.6%	(2) 7.1%	(11) 39.3%	(28) 100.0%
Total	(139) 42.4%	(47) 14.3%	(142) 43.3%	(328) 100.0%

$X^2 = 2.852$. $df = 4$. Not Significant. $C = 0.09$.

Results in Table 5.22 indicate that a high proportion of those who perceived counsellor-client relationship to be good sought little professional help, as is the case with those who reported that counsellor-client relationship was fair. It is also shown in the table that most of those who reported counsellor-client relationship to be poor registered high frequency of seeking

professional help. However, the Chi-Square test shows that the relationship between the two variables is not significant.

Concluding observations

The analyses undertaken in this section, so far, confirm that out of the twelve (12) independent variables included in the study, informants' age, quality and adequacy of meals, client-counsellor and counsellor-client relationships were found not to significantly influence heroin users' predisposition to seek professional help while the rest did. On the basis of the strength of the relationship, it is evident that only success of detoxification and perception of charges are strongly associated with heroin users' predisposition to seek professional help. A more systematic analysis of the relationships with regard to strength and direction of various factors and users' predisposition to seek professional help are presented later using logistic regression in the sections that follow.

Logistic Modeling of Factors Explaining Heroin Use and Predisposition to Seek Help

In this section, the study utilizes binary logistic regression analysis. The rationale behind its utilization is that it is the most appropriate statistical technique in situations (like in this study) where the dependent variable is categorical in nature. More precisely, it enables the comparison and analysis of predictors of “**high**” versus “**low**” frequency of heroin use and predisposition to seek professional help. More so, it is now apparent in statistical analysis that although regression analysis has become fashionable and a lexicon tool for social scientists, the liabilities of regression estimates are severe where the criterion variable is qualitative (binary). In fact, statistical analysts are now aware that when the dependent variable is binary or dichotomous, the key assumptions of multivariate regression cease to hold. Accordingly, where this is the case the

assumptions that are a prerequisite for hypothesis testing in regression analysis are inappropriate⁸.

In addition, where the dependent variable is dichotomous the regression estimates tend to be inaccurate in estimating the magnitude of the effects of the independent variables over the dependent variable. In such a situation, the logistic model becomes a suitable complement of the regression model. This is because in logistic model a nonlinear function of the expectation of a binary variable, called a logistic function, is associated to a linear equation on the independent variables⁹. Thus, logistic regression estimates the probability of an event occurring as captured in the following equation:

$$\text{Prob (event)}^{10} = \frac{1}{(1 + e^z)} \quad [\text{Equation 6.1}].$$

Where **Z** represents the linear combination of predictor variables and can be expressed as follows:

$$Z = b_0 + b_1X_1 + b_2X_2 + \dots + b_pX_p. \quad [\text{Equation 6.2}].$$

Conversely, the probability of an event not occurring can be estimated by the equation:

$$\text{Prob (no event)} = 1 - \text{Prob (event)}. \quad [\text{Equation 6.3}].$$

⁸ This statement is contained in the works of Norusis (1993) on SPSS for Windows Advanced Statistics Version 6.0. Essentially, it cautions against non-careful utilization of regression analysis technique in situations, which obtains in this study, where the dependent variable is categorical. In such situations therefore logistic regression analysis becomes the option because its interpretation for each independent variable is based on the odds of an event occurring, while holding other variables constant.

⁹ The logistic function is related to the linear expression on the independent variables and the interpretation of the logistic estimates is done in terms of the odds of an event occurring. The odds being the ratio of the probability that an event will occur to that it will not. However, caution should be taken not to confuse the odds with probability.

¹⁰ This formula is useful in the computation of the probabilities of occurrence of the events coded as one (1) in all the study's variables.

The interpretation of individual logistic coefficients and the sign of the estimates are similar to that of standard linear regression. More specifically, the logistic coefficient (*b*) is interpreted as the change in the log odds associated with a unit change in the predictor variables, while holding the other independent variables constant.

Apparently, though the interpretation of logistic regression coefficient estimates is akin to that of linear regression coefficient, it is done in terms of the **odds** of an event occurring. The odds of an event occurring are referred to as the ratio of the probability that the event will occur to that of the probability that it will not occur. Throughout the analysis, the change in odds is measured by the value of Expected (*Exp*) *b*. The latter, indicates the factor change in the odds of an event occurring due to a unit change of the predictor variable, while holding other variables constant¹¹.

Further, in this study we report the values of the Overall Percent Correct and -2 Log Likelihood (-2LL) as measures of goodness of fit of the logistic models (Norusis 1993). The former reveals the percent of cases that are correctly predicted by each model, while the latter reveals how likely the sample estimates reflect the parametric estimates. The interpretation is simple in each case in that a high value of overall percent correct is an indicator of a good fit, while a small value of -2LL indicates a good logistic model. To test whether the logistic estimates are significant from zero, the study makes use of the Wald statistic. The latter is given by the equation:

$$\text{Wald Statistic} = \frac{\text{Logistic Coefficient}}{\text{Standard Error}} \quad [\text{Equation 6.4}].$$

¹¹ It is important to note at this point that as in the case of multiple regression analysis, the contribution of each variable in logistic regression analysis is difficult to determine. Imperatively, the contribution of each variable depends on the other variables in the logistic regression model.

Finally, it is important to note that all the analyses in this study are done using the SPSS, while all the testing is carried out at the 0.05 alpha levels.

Results of Logistic Analysis

The sections that follow present the results of the study in two parts corresponding to the two dependent variables. The first part delves in isolating factors influencing heroin use, while the second part focuses on the factors that explain heroin users predisposition to seek professional help. We turn to these sections below.

1. Modeling of Factors Influencing Heroin Use

The previous sections have described in detail the factors influencing heroin use utilizing bivariate statistical techniques. More precisely, the Chi-square statistic has been used to reveal the factors determining the frequency of heroin use. Importantly, in this thesis a case is made that no successful behavioural change or rehabilitative reform can be formulated without adequate knowledge of factors influencing heroin use. In particular, it is argued that it is not possible to effectively mitigate heroin use in the studied sites without knowledge of how heroin users make choices on high versus low use of the drug, especially the factors precipitating high frequency of use. It is in recognition of this that one objective of the study was to:

Identify factors influencing the frequency of
heroin use in the studied areas

Table 5.23 presents data on selected factors determining heroin use. As with other drugs, the study recognizes that the use of heroin is determined by a combination of demographic, socio-economic, environmental and facility-specific factors. Table 5.23 has three logistic regression equations. In equation one, the effects of selected demographic and socio-economic factors on heroin use are tested. Equation two is designed as a control for social environmental

factors, while the last equation introduces facility-specific factors to examine their influence on the likelihood of high heroin use.

Table 5.23: Logistic estimators of frequency of heroin use (n = 328)

Predictor Variables	Equation 1		Equation 2		Equation 3	
	Logit (B ₁)	Factor change in odds (Exp B)	Logit (B ₁)	Factor change in odds (Exp B)	Logit (B ₁)	Factor change in odds (Exp B)
Gender	1.0479 (3.4734)	2.85	0.8796 (2.3826)	2.41	0.7351 (1.2073)	2.09
Age	-0.3506 (1.8654)	0.70	-0.2850 (1.0434)	0.75	-0.3697 (1.2406)	0.69
Marital status	-0.2646 (0.6934)	0.77	-0.2530 (0.5636)	0.78	-0.1609 (0.1613)	0.85
Education level	0.6736** (7.7233)	1.96	0.7016** (7.3523)	2.02	0.9284** (8.3752)	2.53
Occupation	0.9245** (7.2416)	2.52	0.6206 (2.7490)	1.86	0.5822 (1.7083)	1.79
Income	-0.5723* (5.1731)	0.56	-0.3614 (1.8272)	0.70	-0.5780 (3.1543)	0.56
Family Instability	-----	----	-0.1096 (0.1520)	0.90	-0.5028 (2.0674)	0.61
Heroin Availability	-----	----	-1.3475 (1.6942)	0.26	-1.8763 (1.6697)	0.15
Heroin Affordability	-----	----	1.7547* (5.2283)	5.78	1.7584* (4.3541)	5.80
Peer influence	-----	----	-0.9286** (7.1345)	0.40	-1.2046** (9.2177)	0.30
Success detoxification	-----	----	-----	----	-1.0549 (4.8527)	0.35
Perception of charges	-----	----	-----	----	-0.4483 (1.5775)	0.64
Client-counsellor relationship	-----	----	-----	----	-0.0407 (0.0028)	0.96
Counsellor-client relationship	-----	----	-----	----	0.4800 (0.4455)	1.62
Constant	-1.7977** (9.4216)	----	0.2722 (0.0489)	----	1.8909 (1.0539)	----
Overall Percent Correct	71.31%	----	74.58%	----	77.24%	----
-2LL	415.762	----	377.654	----	265.304	----

NB. “ * “ Indicates that P < 0.05 (one tailed test). “ ** “ Indicates that P < 0.01 (one tailed test). Numbers in parenthesis indicate Wald Statistic = Logistic Coefficient/ Standard Error.

Logistic regression findings from equation 1 in Table 5.23 reveal that demographic attributes such as gender, age and marital status are not important determinants of high heroin use among sampled informants. Most likely, where heroin use is prevalent, users become dependent on the drug. Once addicted, background factors become less important in explaining high frequency of heroin use. At this stage, users are compelled more to heroin by the need and desire to feel its effects and avoid the discomfort associated with its absence, thus explaining high frequency of its use among the informants.

On the other hand, the three socio-economic factors (level of education, occupation and income) seem to be important determinants of the likelihood of high heroin use. Level of education and occupation exert a significant positive effect on the probability of high use of heroin. This finding was a surprise as it negates Abdool (1998) and UNDCP (1998) who states that improved educational level and employment status of individuals are associated with reduced drug use, including heroin. To the contrary, the finding here reveals increasing use of heroin with improved educational attainment and employment status. The question then is: Why does education and employment status significantly increase the likelihood of high heroin use? Two possible reasons can be advanced to explain this trend. First, Informants with certain level of education and those who are in employment can easily afford to take more of the drug in order to get the expected effects and maintain normal body functions than those with less education or who are unemployed. Second and as noted in the literature, proponents of anti-drugs stipulate that heroin has a high tolerance and that it's highly addictive (Abdool 1998, UNDCP 1998).

Conversely, the study also reports that income exerts a significant negative influence on the probability of high use of heroin. Importantly, the finding suggests that low-income levels among sampled informants can significantly increase their likelihood of high use of heroin. Most

likely, people with low incomes suffer many socio-psychological problems and hence use the drug as an escape from such predicaments. On the contrary, users with high income can afford detoxification and rehabilitation services, thus reducing their consistent dependence on the drug.

In equation 2 of Table 5.23, we control for social environmental factors. More precisely, we first control for heroin availability, family instability and peer pressure. Second and most important for this study, we control for affordability of heroin in order to establish its effect on the probability of high heroin use. More significantly, since heroin is an expensive drug, we have controlled for its affordability in equation 2 in order to test the hypothesis that:

Environmental factors (heroin availability, family instability,
peer influence and heroin affordability) significantly
determine the probability of high heroin use.

Apparently, the inclusion of environmental factors in equation 2 also improves the goodness of fit of the first logistic regression model in equation 1. Indeed, the values of Overall Percent Correct and -2 Log Likelihood in equation 2 [74.58% and 377.654] respectively are a remarkable improvement of those in equation 1 [71.31% and 415.762], implying that equation 2 is a better model than its predecessor.

Evidently, there are two more new findings to report in equation 2 of Table 5.23. First, we observe that heroin affordability significantly increases the probability of its high use. This finding confirms that cost of heroin is an important determinant of its frequent use among informants. The finding suggests that where cost of heroin constitutes a high price, all things remaining constant, a rational user of heroin would reduce frequency of use. This point is aptly captured in the study's theoretical framework under the demand and supply theory. One of the principles of this theory is that the higher the price of a commodity the lower the demand for it.

Second, peer influence registers a significant negative effect on the likelihood of high heroin use. This finding is a surprise as it suggests that the higher the frequency of using heroin as a group activity the lower the probability of its high use. Most likely, where using heroin in groups is prevalent, users may be limiting the amount consumed in the sense that it may not be adequate to go round to meet frequent consumption. Note that when cost of heroin is introduced in the model, occupation and income cease to have significant effects on the probability of high heroin use. This suggests that affordability of heroin is a critical factor determining the likelihood of high use of heroin independent of both educational level and occupational status.

In equation 3 of Table 5.23, we test the influence of facility-specific factors on the probability of high heroin use. Accordingly, we compare the effects of perceived success of anti-heroin therapy (detoxification), charges levied in rehabilitation centres, counsellor-client and client-counsellor relationships on the likelihood of high heroin use. Significantly, there is no new finding to report in equation 3 of Table 5.23. The equation reconfirms that education level, heroin affordability and peer influence are the best predictors of the likelihood of high heroin use among informants. Notable also is the fact that controlling for perceived facility-specific factors makes occupation and income non-critical predictors of high likelihood of heroin use.

It is also important to note that equation 3 seems to be the best logistic regression model as indicated by the values of Overall Percent Correct (77.24%) and -2 Log Likelihood (265.304).

Logistic Analysis of Factors Influencing Predisposition to Seek Professional Help

In an earlier section of this thesis a detailed analysis of the factors determining predisposition of heroin users to seek professional help was undertaken. More precisely, some of the factors exerting significant effects on the predisposition of heroin users to seek professional help were highlighted. In this section a case is made that no successful rehabilitative reform can

be formulated for heroin users without adequate knowledge about factors influencing their predisposition to seek help. In particular, it is argued that it is not viable to assess effectively the efficacy of heroin rehabilitation centres in the study sites without knowledge of how heroin users make choices on the utilization of the available rehabilitation centres. It is against this background that we examine the factors exerting a significant influence on the likelihood of strong predisposition to seek help among heroin users in the study sample. To achieve this, the logistic regression analysis presented here is guided by the following research question:

Why do some heroin users readily seek professional help
and others avoid seeking such help?

As with utilization of other facilities and services, the predisposition of heroin users to seek help was hypothesized to be determined by a combination of demographic, socio-economic, environmental and facility-specific variables. Accordingly, three logistic regression models were generated in Table 5.24 using a combination of factors to predict the likelihood of high predisposition to seek professional help.

In equation 1 of Table 5.24, it emerges that out of the three (3) background variables considered for logistic regression analysis, only informants age is significantly related to the probability of high predisposition to seek help. The results suggest that the higher the age of heroin users the higher the likelihood of seeking professional help. The question then is: Why are older heroin users more likely to seek professional help than their youthful colleagues? Three possible reasons may explain this pattern. First, older heroin users may cease to find heroin consumption as exciting as it used to be in their youthful years. Second, many of older users may realise that they need to settle down to a normal life, which may include the need to take up adult

responsibilities. Third, some of the older users may become more susceptible to various illnesses whose treatment in the rehabilitation centres may require cessation of heroin use.

Table 5.24: Logistic estimators of heroin users predisposition to seek help (n = 328)

Predictor Variables	Equation 1		Equation 2		Equation 3	
	Logit (B ₁)	Factor change in odds (Exp B)	Logit (B ₁)	Factor change in odds (Exp B)	Logit (B ₁)	Factor change in odds (Exp B)
Gender	0.1163 (0.0470)	1.12	0.1368 (0.0619)	1.15	0.3509 (0.3456)	1.42
Age	0.7670* (5.2558)	2.15	0.7288* (4.2009)	2.07	0.6084 (2.2693)	1.84
Marital status	-0.0155 (0.0013)	0.99	-0.1057 (0.0569)	0.90	-0.0523 (0.0111)	0.95
Education level	0.4049 (1.3911)	1.50	0.4826 (1.8436)	1.62	0.5191 (1.6121)	1.68
Occupation	0.5304 (0.6812)	1.70	0.6774 (1.0345)	1.97	0.7104 (0.9772)	2.04
Income	1.0622** (9.2854)	2.89	1.0826** (9.3486)	2.95	1.1525** (8.1767)	3.17
Family Instability	----	----	-0.2908 (0.6444)	0.75	-0.1975 (0.2312)	0.82
Heroin Availability	----	----	-6.4219 (0.0457)	0.01	-6.6788 (0.0251)	0.01
Heroin Affordability	----	----	6.8453 (0.1079)	939.47	7.3484 (0.1440)	1553.76
Peer influence	----	----	0.7281 (2.7758)	2.07	0.9403* (3.8753)	2.56
Success detoxification	----	----	----	----	1.1953* (4.2038)	3.31
Perception of charges	----	----	----	----	1.0061* (4.2313)	2.74
Client-counsellor relationship	----	----	----	----	0.5238 (0.1997)	1.69
Counsellor-client relationship	----	----	----	----	-3.2136* (5.0226)	0.04
Quality of meals	----	----	----	----	2.1226 (3.2830)	8.35
Adequacy of meals	----	----	----	----	-0.2268 (0.0582)	0.80
Constant	0.7276 (1.7015)	----	6.5287 (0.0472)	----	5.7152 (0.0184)	----
Overall Percent Correct	87.43%	----	87.19%	----	85.50%	----
-2LL	264.692	----	249.118	----	195.955	----

NB. “ * “ Indicates that P < 0.05 (one tailed test). “ ** “ Indicates that P < 0.01 (one tailed test). Numbers in parenthesis indicate Wald Statistic = Logistic Coefficient/ Standard Error.

As expected, findings involving the socio-economic factors included in equation 1 of Table 5.24 confirm that income is a critical predictor of the likelihood of high predisposition to seek professional help. The positive sign of the logistic coefficient suggests that the higher the income the higher the likelihood of readiness to seek professional help. Presumably, where heroin users have high-income rehabilitation services become more accessible and affordable to them. Further, high-income informants are likely to be more educated and hence more likely to be knowledgeable of the adverse effects of heroin use.

In equation 2 of Table 5.24 we have incorporated environmental variables including availability and affordability of heroin, family instability and peer influence. As explained in the research methodology section of this thesis, informants were sampled from diverse contexts and this therefore explains the rationale for controlling for environmental factors as indicated in equation 2. Importantly, it should be noted that the inclusion of environmental variables in the equation also improves the goodness of fit of the logistic regression model (the value of $-2LL$ drops from 264.692 in equation 1 to 249.118 in equation 2). It should be noted further that a part from the improvement in the goodness of fit of the model as indicated by the value of $-2LL$, equation 2 merely reconfirms our major findings in equation 1 that informants' ages and incomes exert positive and significant effects on the probability of high predisposition to seek professional help.

Finally, in equation 3 of Table 5.24 we control for facility-specific factors to determine overall which factors are critical predictors of high predisposition to seek professional help. The additional variables included for analysis are perceived success of detoxification, charges levied in some of the rehabilitation centres, client-counsellor and counsellor-client relationships, as well as quality and adequacy of meals in the centres.

Instructively, in equation 3 of Table 5.24 there are four new findings to report. To begin with, when we control for facility-specific factors age ceases, while peer pressure becomes a critical determinant of high likelihood of seeking professional help. Why does peer pressure become critical? Most likely, where heroin use is a group activity, those involved develop bonds of attachment in their heroin use culture that ultimately determines the decisions individuals make, and in this case seeking professional help. Thus, the decision to seek professional help, and the choice of a specific rehabilitation centre, will largely depend on the predisposition of the larger heroin sub-cultural in-group.

Second and as would be expected, equation 3 of Table 5.24 depicts that success of detoxification exerts a positive influence on the likelihood of high predisposition to seek professional help. This finding suggests that heroin users who perceive anti-heroin therapy to be successful in the available rehabilitation centres are more likely to seek help from such centres. This finding implies that heroin users are very rational in making choices with regard to which rehabilitation centre they will seek professional help from. We observe therefore that where anti-heroin therapy is considered to be successful it raises the confidence heroin users have in the rehabilitation services offered.

The third point that emerges in equation 3 of Table 5.24 is the interesting finding that high perception of charges or user levies has a positive significant influence on the high likelihood to seek professional help. This finding runs counter to expectations. Why does high-perceived cost of rehabilitation services significantly increase the likelihood of seeking professional help? A possible explanation is that although perceived charges of rehabilitation services may be prohibitive in the short run, if the charges improve the quality of services, then they may not matter much in the long run. Accordingly, heroin users may eventually interpret

high charges as a proxy for improved quality of rehabilitation services. This finding is further supported by field experience, which shows that heroin rehabilitation centres that charge low or no fee are deemed to offer low quality rehabilitation services.

Fourth, equation 3 also reveals that counsellor-client relationship exerts a negative significant influence on the likelihood of high predisposition to seek professional help. This finding is also unexpected. Why does a positive counsellor-client relationship reduce the high likelihood of seeking professional help among heroin users? Available evidence as presented previously in this study confirms that the primary factors that influence choice of seeking rehabilitation services are success of detoxification, peer influence, income and perception of charges. In this sense, negative counsellor orientations to clients are less effective as a disincentive in seeking professional help. This explains the co-existence of poor counsellor perceptions of clients and the latter readiness to seek professional help in the rehabilitation centres.

In conclusion, it should be noted that the inclusion of all background, socio-economic, environmental and facility-specific factors as reflected in equation three (3) offers the best logistic regression model explaining high predisposition to seek professional help among the sampled heroin users. More precisely, in addition to having five variables that significantly influence the likelihood of high predisposition to seek professional help, the $-2LL$ value of [195.955] is lower than that of equation 1 [264.692] and that of equation 2 [249.118].

CHAPTER SIX

PRESENTATION OF QUALITATIVE RESULTS ON THE EFFECTIVENESS OF HEROIN REHABILITATION CENTRES

This chapter makes use of qualitative data derived from Focus Group Discussions (FGDs) and In-depth Interviews with various key informants regarding the effectiveness of heroin rehabilitation centres. Focus Group Discussions were conducted with counsellors and members of heroin rehabilitation centres' management boards. In-depth Interviews were carried out among police, prison warders and medical officers. Importantly, the chapter is an attempt to achieve two of the study's objectives:

1. To establish factors that account for the effectiveness of some of the heroin rehabilitation centres in facilitating recovery and social reintegration of users and
2. To find out the perceptions of counselors, members of management boards, police officers, prison warders and medical officers regarding the rehabilitative work.

Accordingly, the format of the chapter is presented in the two sections that follow.

A: Assessment of the effectiveness of heroin rehabilitation centres by key informants and

B: Challenges facing the studied heroin rehabilitation centres.

Presentation of the views of the various stakeholders regarding the effectiveness of the centres will be based on certain indicators. The definition and measurement of such indicators is shown in Table 3.2 in Chapter Three of this work.

A: Assessment of the Effectiveness of Heroin Rehabilitation Centres

This section presents an analysis of data on the central theme of this thesis namely the effectiveness of heroin rehabilitation centres. To achieve this, the section incorporates *inter alia* the views of various key informants in rehabilitation work. This approach is adopted because it utilizes the individual as a major frame of reference in the analysis of effectiveness. This is born out by the fact that individuals have different perceptions regarding the effectiveness of the organization they interact with. For example, Giordano (1977) reported that users of a juvenile system had clearly different views of the effectiveness of organizations such as courts, police, and probation centres, than the staff of these organizations. Thus, owing to the diversity of views generated from interviewing various rehabilitation stakeholders in this work the following format is adopted in the presentation of the results.

1. Effectiveness as viewed by counsellors and management board members and
2. Effectiveness as viewed by the prison warders, police, and medical officers

Notably, the discussion of qualitative findings incorporates the viability analysis of heroin rehabilitation centres to users through the interpretation of resources, caliber of professional care and rehabilitation programmes provided by the centres.

1. The Views of Counsellors and Management Board Members

Heroin rehabilitation centres effectiveness assessment was done using the five qualitative indicators reflected in Table 3.2 of this work. To reiterate, FGDs were held with rehabilitation centres management boards members and counsellors to obtain their views regarding the effectiveness of their centres. The results with respect to each of the five indicators of effectiveness are discussed in the sections that follow.

(a) Indicators related to sound management

As mentioned in the literature review section, heroin rehabilitation centres were formed to facilitate recovery and social reintegration of users as functional participants in the community. This makes heroin rehabilitation centres responsible for the management of the users. To this end, this study attempted to assess the perception of counsellors and members of management boards regarding the operations of these centres as measured by supervision, utilization of resources and status of physical plant. The views of counsellors and management board members regarding the workings of rehabilitation centres as measured by the three indicators are discussed along three components.

First, in this study, the variable supervision of rehabilitation centres refers to the degree to which counsellors and members of rehabilitation centres management boards monitor the operations of these centres. The variable is measured by the frequency of supervision of clients by counsellors and of staff by management board members. Results of the study reveal that all of the studied rehabilitation centres were found to be effective as indicated by supervision of clients and counsellors. More specifically, participants in the FGDs from MEWA, SINAM, Omari Project, Bofu Maskan and Reach Out Rehabilitation centres acknowledged that their centres were effective as measured by supervision of clients and counsellors. Precisely, participants reported that patrons and counsellors were being supervised on a 24-hour basis. The reason given by most participants to explain the close supervision of rehabilitation activities was that heroin users are treacherous. One participant in Omari Project captured this view appositely when she said that:

Heroin clients should be under close surveillance, for the slightest opportunity they get could be used to cheat the system that they are abstinent and yet they have relapsed.

Instructively, the high frequency of supervision of clients and counsellors suggests sound management practices by the heroin rehabilitation centers. This finding is not unique to this study as it is a reflection of the sound management practices characteristic of civil society organizations in the country.

Second, sound management of heroin rehabilitation centers was measured by the way resources were being utilized. The variable utilization of resources was included in the study because prudent use of resources can ensure quality service provision. Utilization of resources was herein conceptualized in terms of the degree to which revenue was being spent efficiently. Specifically, the study looked for evidence of misuse and diversion of resources in the studied rehabilitation centres. Findings of the study showed that all of the studied heroin rehabilitation centres were effective as indicated by utilization of resources. Indeed, FGDs participants in the studied centres reported that resource utilization was sound. The reason they advanced for the soundness in resource utilization was that they were based on an approval system, which checks on wastage, misuse and diversions. More so, participants revealed that there were stipulated disciplinary measures that could be applied to those members who were not compliant to centres expenditure guidelines. This was clearly stated by one board member in MEWA Rehabilitation and Resource Centre (MRRC) when he revealed that:

While we have not discovered cases of misappropriation (i.e. larceny, frauds, embezzlement or diversions) in the utilization of resources, our board is powerful to pursue such matters to their logical conclusion.

This informant voice shows that heroin rehabilitation centres have powers to discipline the facility staff for misappropriation of resources. This finding supports our earlier finding that heroin rehabilitation centres have sound management practices reminiscent of other civil society agencies in the country.

Third, the study looked at the status of the physical plant to ascertain the effectiveness of heroin rehabilitation centres as measured by good management. Interestingly, the researcher observed that in three (3) out of the five (5) studied heroin rehabilitation centres there was limited space to carry out their rehabilitation programmes and for expansion. In terms of the status of physical plants, participants from MEWA, SINAM, Omari Project and Reach Out reported that it was good. However, the feeling of all members of FGDs, counsellors and management board officials, in the studied rehabilitation centres was that new and spacious facilities be established. This is to take care of the growing number of heroin clients because the existing facilities are inadequate and their physical status is dwindling due to growing lack of resources.

(b) Indicators related to successful counselling

As stated in Chapter Two of this work, heroin rehabilitation centres have a number of responsibilities to perform in facilitating recovery and social reintegration of addicts. This study attempted to look for evidence to assess the effectiveness of these centres as measured by successful heroin counselling. Counselling regarding drug abuse, including heroin, is an art in which knowledge of human relations and skills in relationships are used to help a drug dependent person find personal will power and resources in the community so that he or she can adjust, cope and lead a productive life free from such dependence (Abdool et al 1998). However, in this study the variable successful counselling is conceptualized in terms of the counsellors' commitment to devote their time in doing rehabilitation work. As Table 3.2 shows, effectiveness as indicated by successful counselling was measured using three indicators.

Regarding the indicators of quality of counsellors and frequency of counselling sessions, FGDs participants indicated that of the five heroin rehabilitation centres studied three were

ineffective. Apparently, only participants from Omari project and MEWA rehabilitation centres reported that they had some trained counsellors and counselling for both individual and group sessions were being done on a daily basis. Thus, the high ineffectiveness (in SINAM, Bofu Maskan and Reach Out) as measured by quality of counsellors and frequency of counselling sessions is probably explained by lack of adequate remuneration and drug counselling training institutions within easy reach of these centres. These bottlenecks were captured vividly in our Focus Group Discussion with counsellors of Bofu Maskan when they revealed that:

We the counsellors at Bofu Maskan are fewer compared to the heroin users we are supposed to work with daily.... we have also no formal training to facilitate meaningful sessions
... We are just helping but none of us is a trained drug-counsellor....

Field observations also showed that the problems of inadequacy and a dearth of trained counsellors were actually being experienced in all the studied rehabilitation centres. Almost all involve the services of on-the-job-trained drug counsellor volunteers.

Third, successful counselling was also measured by counsellor-client relationship. This indicator was included in the analysis because rehabilitation efforts of the counsellors would be compromised where their relationship with patrons is unfavourable. In this thesis, the indicator counsellor-client relationship was conceptualized in terms of the willingness of counsellors and clients to work affably. Results showed that in all the studied rehabilitation centres counsellor-client relationship was favourable. The relationship was cordial because counselling is a helping process. What the clients had to do was to reciprocate this gesture. A management board participant in MEWA rehabilitation centre further confirms the amiable relation between counsellors and patrons when he observed that:

Our counsellors are empathic... as this job requires understanding and acceptance of clients... that increases with practice.

This finding implies that heroin rehabilitation counsellors are compliant and this inclination made their relationship with their clients more genial. This finding reconfirms our quantitative result in Chapter Five that counsellor-client relationship was favourable. Field observation by the researcher corroborates this fact in that the desire to help and get helped among counsellors and clients respectively was found to be overwhelming in the studied centres.

(c) Indicators related to successful treatment

Heroin rehabilitation centres have the mandate of ensuring successful treatment of their patrons. Accordingly, this study attempted to evaluate whether rehabilitation centres were effective in fulfilling this mandate. Successful treatment was herein measured by absence of withdrawal symptoms and incidences of relapse. Findings of the study revealed that all the studied heroin rehabilitation centres were effective as measured by absence of withdrawal symptoms amongst their clients. This revelation by the counsellors and management board members further confirmed the views of heroin users, as revealed in Chapter Five, that heroin rehabilitation centres had a strong detoxification or anti-heroin therapy. Instructively, when the researcher probed further on the availability of anti-heroin drugs, it was unanimously reported that they were available and adequate. One participant of FGDs at Omari Project in Malindi aptly captured this consensus when he observed that:

Drugs for anti-heroin therapy were always available... we normally don't take in clients unless we are sure that they are adequately budgeted for in terms of accommodation, meals and more critical the amount of drugs they are to take for the entire detoxification period, which on average lasts for seventy two (72) hours.

Contrary to expectations, counsellors and management board members involved in the study's Focus Group Discussions rated heroin rehabilitation centres as being ineffective as measured by incidences of relapse. This view is corroborated by field observation, which showed that a number of the heroin users who participated in the study interviews were once or more

than once treated in a rehabilitation centre. However, when we put the counsellors to task on why most clients go back to heroin after rehabilitation, they had this to say:

Aaaaah!!!... That is not a surprise to us.....heroin relapse rate is very high here.... this is because most users think that when they have managed the withdrawal syndrome associated with physical dependence, they are free of heroin addiction.... they fail to recognize the power of psychosocial coercion, which is the root-cause of most, if not all, relapses.

This citation confirms Abdool et al (1998) view that often drug users will quit attending counselling and relapse prevention sessions once they feel that they are now drug free and no longer suffer the perils of withdrawal symptoms. Within this support gap, when temptation to re-use heroin is experienced psychosocial support systems are therefore absent to prevent such relapses.

(d) Indicators related to board support

As revealed in the literature review section, management boards run heroin rehabilitation centres. Accordingly, this study gathered evidence to assess the effectiveness of these centres in facilitating rehabilitation and social reintegration of users. In this study, the variable “board support” was taken to refer to members’ commitment to allot their time in doing rehabilitation work. Three indicators measured this variable namely frequency of attending meetings by members, frequency of visits to the centre and board’s management relations.

Findings from FGDs showed that all the five-rehabilitation centres studied were effective as measured by frequency of attending board meetings and the number of visits board members had made to these centres. More precisely, FGD participants reported that in the year predate the study board members had visited the centres on a regular basis and had availed themselves for board meetings whenever they were called upon to do so. Where management boards were responsible for the running of organizational affairs, they become the engine of their operations. This partly accounts for the members’ commitment to their ideals. The higher level of

rehabilitation centres' effectiveness as indicated by good board support implied that members had confidence in the work of the boards. One participant in SINAM brought out this very well when she stated that:

Meetings were a useful tool in planning and implementing rehabilitation programmes...they help in the identification and utilization of resources... they were the only mechanism for checks and balances in the running of rehabilitation centre's affairs.

In addition, field observation showed that there was a greater desire to help rehabilitate heroin users by the board members. This support from the board members was expected because it implied commitment to their work to mitigate the effects of heroin use, which was associated with all forms of anti-social behaviour in the community. Thus, board members willingness to help heroin users was probably a manifestation of the desire to alleviate the consequences of the problem.

Furthermore, board support was indicated by the component of board's management relations. In this study, boards management relations denoted the degree to which board members facilitated harmonious working environments among the various stakeholders in the rehabilitation process. Results of the study shows that all the boards were rated to be effective in the way they were working with clients and other stakeholders in the rehabilitation process. This confirms an earlier finding of this study that board members were committed to their work.

(e) Indicators related to successful reintegration

Heroin rehabilitation centres have the common goal of ensuring successful social reintegration of the recovering users. In fact, according to Abdool et al (1998) rehabilitation is more than avoiding heroin use as it includes helping clients to reintegrate into their communities as productive and valued participants. For that reason, this study attempted to evaluate whether rehabilitation centres were effective in fulfilling this goal. Successful social reintegration was

herein measured by community acceptance of users and resumption of social roles by the rehabilitated users. Results of the study showed that heroin rehabilitation centres were *ineffective* as measured by community acceptance of users and resumption of social roles by the latter.

Findings from Focus Group Discussions with counsellors and management board members also revealed that the community had lost confidence with such centres and heroin users. The reasons given for the lack of confidence were the high rate of relapse of those who have attempted rehabilitation and absence of vocational skill training in these centres. Instructively, this revelation depicted that there was lack of understanding of rehabilitation processes by the community and recognition that they were parties to the rehabilitation process for successful social reintegration to be achieved. It was also suggested by the FGD participants that there was lack of support from the community of the rehabilitation facilities and recovering users.

Imperatively, these findings implied that lack of vocational skill training and community acceptance of recovering users contributed to the high rate of relapse. This is because recovering heroin users, though free from the drug after undergoing anti-heroin therapy, remain vulnerable to other correlates of addiction. Indeed, recovering heroin users require community support and understanding, particularly during the first few weeks when they are likely to experience apprehension towards their previous social environment to which they are to return after leaving rehabilitation centres (Abdool et al 1998). Thus, they need skills to keep them busy and participate in the community's production processes. Apart from the legitimate income that work can provide, occupational responsibility fulfills other rehabilitation goals such as making new abstinent friends and meeting role models. One counsellor at the MEWA Rehabilitation and Resource Centre (MRRC) corroborated this discourse when he said that:

Recent rehabilitated heroin users need empathy on the part of the community of origin... where this is not fulfilled the recovering heroin users will feel isolated and will want to return to their heroin use friends, their heroin abuse rituals and lifestyles... where they will find ready and unconditional acceptance.

It was apparent from the study findings on this issue that heroin rehabilitation centres were not effective as measured by community acceptance of users and resumption of social roles by rehabilitated users. The results implied that recovering heroin users needed both vocational skills and community acceptance as mitigating mechanism for relapse prevention.

2. Views of Key Informants on the Effectiveness of Heroin Rehabilitation Centres

Assessment of the effectiveness of heroin rehabilitation centres as viewed by various key rehabilitation stakeholders was done using five qualitative indicators. These indicators, *inter alia*, included good management and board support, successful treatment, counseling and social reintegration. More precisely, in-depth interviews were held with the police, prison warders and medical officers to collate their views regarding the effectiveness of these centres.

As expected, findings of the study revealed that police, prison warders and medical officers were not aware of the existence of these centres and hence were not in a position to give informed views regarding whether or not they were effective as measured by the various indicators. This finding confirms an earlier fact made in this thesis that for the many decades that heroin rehabilitation centres have been in operation, their legitimacy and operations have remained equivocal.

As indicated in the earlier sections of this work, drug rehabilitation is a relatively new concept in Kenya. NACADA which was mandated by Gazette Notice No 2841 of 2001 to construct drug abuse rehabilitation centres has not been able to do so. This is because NACADA has been experiencing many teething problems on its operations, among them lack of qualified manpower and inadequate financing. This has made drug users to suffer in the hands of police

and prison officers due to the fact that drug abuse in Kenya is treated not as a socio-psychological problem requiring rehabilitation, but a criminal offence punishable by incarceration.

Medical officers though helpful in the detoxifying heroin users, have a problem in the way they treat abusers. More specifically, in the whims of medical personnel heroin abuse is regarded as a mental problem to be treated in a psychiatric wing of the hospital. This approach stigmatizes heroin users and their families making them averse to such help. More so, medical facilities lack trained manpower to handle the rehabilitation of heroin users.

B: Challenges Facing Heroin Rehabilitation Centres

The previous sections of this work have discussed in detail stakeholders' views on the salient and pertinent issues affecting the effectiveness of the studied heroin rehabilitation centres. This particular section is dedicated to a discussion of the major challenges facing heroin rehabilitation centres in facilitating recovery and social reintegration of heroin user. Participants in FGDs and key informant interviews singled out five (5) major problems bedeviling rehabilitation centres.

To begin with, heroin rehabilitation centres lacked financial resources for effective operations. Indeed, the selected heroin rehabilitation centres' board members reported that heroin centres had no stable source(s) of operational finances. One key informant in the MEWA Rehabilitation and Resource Centre (MRRC) aptly articulated this condition when he stated that:

The centre (MRRC) has no permanent sources of finances...we depend on well-wishers to pay our overheads including salaries to staff; while the little user levy charged (Kshs150.00 per client a day), whose collection is problematic, goes to fend for the addicts' daily meals, which is in itself not suffice.

This problem had severely handicapped the heroin centres in meeting their obligations of ensuring the availability of additional essential drugs for detoxification, payment of bills among

other expenses. Field observation also revealed that among the five-studied heroin centres none had a vocational rehabilitation or a follow up programme. This further confirmed the problem of lack of financial resources given that such programmes require a sound financial investment that was lacking.

Another hindrance identified by the FGD informants to the effectiveness of heroin rehabilitation centres was lack of appropriate drugs for detoxification. This problem emanated from the Kenya government legislative framework and the drug use policy, which do not allow the use of heroin or methadone in treating addicts. Such use is deemed illegal and liable to prosecution. However, ideally addicts are supposed to be given heroin or methadone treatment on smaller doses for a period of usually 72 hours to neutralize the toxicity of heroin before the onset of rehabilitation. This scenario has made heroin rehabilitation experts to utilize alternative detoxification drugs at the detriment of the clients, who suffer prolonged withdrawal symptoms. In trying to empathize with users as they suffer prolonged withdrawal symptoms, one participant of FGDs in Omari heroin rehabilitation project had this to say:

Use of heroin and methadone treatment for heroin addicts is not practiced in Kenya...it amounts to a violation of the law, which prohibits such use...unfortunately *(he continues)* this situation exists against a backdrop of ignorance among state officials on how difficult it is to detoxify heroin addicts under such circumstances.

In addition, a dearth of professionals was also identified as challenge facing the studied heroin rehabilitation centres. Among the five (5) centres studied, only counsellors from MRRC had formal training in counseling. The rest operated with counselors who had mastered the art on-the-job through apprenticeship or attachment programmes. However, when the participants were probed as to why they decided to work with addicts and yet they lacked the requisite skills, one of them had this to say:

Working with heroin addicts is a calling from God to help those who have
Gone a stray...it requires more of patience and commitment to
deal with them and not mere professional qualifications.

This voice of the participant supports field observation that heroin addicts were very difficult clients to deal with. In fact, in addition to professional qualification, one requires a lot of understanding and courage to help them. This problem was exacerbated by the harsh working conditions counsellors had to undergo. First, counselors had no insurance cover despite the fact that their work was dangerous, as some of the addicts were violent. Secondly, they lacked the requisite tools and worked under minimal or no office space. Thirdly, they were underpaid and worked for long hours without overtime and in some centres 24 hours a day for the same pay package. Finally, their terms of service had no stipulations for a pension scheme. All these factors have implications on the motivation of the counsellors as they help the addicts recover and reintegrate into their communities.

Further, FGD participants in almost all the studied heroin rehabilitation centres reported that their centre lacked adequate land for expansion. More specifically, the centres needed more land for extra-curricula activities such as sports or to develop vocational rehabilitation facilities in agriculture, woodwork and carpentry among others to engage the addicts in productive work and skill training to make them self-reliant upon discharge. One board member from MRRC summarized this challenge very well when he observed that:

Addicts are squeezed with no space to play or engage in productive work that is
beneficial to self or the centre...we want to start vocational rehabilitation
activities but there is no land to do so.

Finally, participants reported that studied heroin rehabilitation centres tended to experience high relapse rates among their clients. High relapse rate implied that rehabilitated heroin users were not able to sustain their newly learned behaviour of abstaining from heroin use. However, when

participants were probed why they were registering high cases of relapse, they were categorical that heroin rehabilitation centres lacked resources to conduct successful follow-ups. Thus, discharged heroin users' lacked guidance and counselling in their communities. It is also possible that some faced new challenges that they could not cope with and relapsed in the process due to lack of such support and guidance or counseling in resolving problems. One participant from SINAM rehabilitation centre captured this sentiment very well when he observed that:

Rehabilitated addicts went back to the community unprepared for the challenges of their previous heroin discrimination and stigmatization.... they also find themselves in the same (old) area where they can easily access heroin, meet old friends...it is sad to say that they don't have help from the centres that helped them to abstain from drugs.

From the above excerpt it is clear that heroin addicts need professional help beyond their discharge in form of follow-up programmes. These programmes are to assure the addicts that they can get support and help whenever they need it in their new journey to recovery. Thus, successful rehabilitation and social reintegration cannot be feasible unless it relies upon adequate support and cooperation from the family, friends, and community and importantly the rehabilitation centre from where one was reformed.

In the next chapter, we present summary, conclusions and recommendations of the study based on the research findings presented in Chapters Four and Five of this work.

CHAPTER SEVEN

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

This study sought to understand the effectiveness of heroin rehabilitation centres in some selected sites at the Coast of Kenya. More precisely, the study looked at issues of pre-heroin use, use, rehabilitation and its outcomes. The summary of major findings, conclusions, implications and recommendations for social action, policy and for further research are presented in the sections that follow.

Summary, Conclusions and Implications of the Findings

The key findings of this study were presented in Chapters Five and Six. In Chapter Five, factors influencing frequency of heroin use and predisposition to seek professional help were examined, while Chapter Six addressed input and process factors that had a bearing on the effectiveness of heroin rehabilitation centres. The summary, conclusions and implications of the key findings of this study are presented next.

A. Factors Influencing the Frequency of Heroin Use

This study asked the question: Why do some heroin users' use heroin more frequently than others? To answer this research question, some selected demographic, socio-economic, environmental and facility-specific factors were examined. Results of the study showed that these factors vary on the degree to which they influence users' frequency of heroin use. Notably, though all the variables considered did contribute to the understanding of the phenomenon of frequency of heroin use, not all were significant on Chi-square analysis. Furthermore, some of those significant factors under Chi-square tests were found to be insignificant in the logistic regression model. This implied that such relationships were spurious for inclusion of control variables in the logistic regression model cancelled out their influence on the dependent variable.

Amongst the demographic, socio-economic and environmental factors considered for Chi-square analysis, educational attainment, occupational status, affordability of heroin and peer pressure were found to be not only important factors but also had a significant influence on the frequency of heroin use. Table 7.1 provides a summary of the key variables significantly related to the frequency of heroin use to facilitate easy reading and comprehension of the study's key findings.

Table 7.1: Key factors influencing frequency of heroin use

Variables	Chi-square (χ^2)	Degrees of Freedom (df)	Significance Level
Socio-Economic			
▪ Educational Attainment	16.702	4	P<0.002**
▪ Occupational status	26.248	6	P<0.001***
Environmental			
▪ Affordability of heroin	13.957	4	P<0.007*
▪ Peer influence	148.290	4	P<0.001***

Note: * P<0.007 ** P<0.002 *** P<0.001

There was interest also to determine which factors, independent and intervening, best predict frequency of heroin use among the informants. The rationale for this was that influence or correlation is not the same thing as cause or impact; only prediction would give some insights into the issue of causality or impact. To this end, logistic regression analysis was undertaken given that the variables used in this study were categorical or discrete. Instructively, when the researcher controlled the influence of demographic, socio-economic and environmental variables by introducing facility-specific factors using logistic regression analysis, it was found out that

only educational attainment, heroin affordability and peer influence were the best predictors of the likelihood of high frequency of heroin use among the sampled informants. Apparently, controlling for facility-specific factors made occupation and income non-critical determinants of the high likelihood of frequency of heroin use. Furthermore, the equation combining all the demographic, socio-economic, environmental and facility-specific factors was the best logistic regression model as indicated by the value of the Overall Percent Correct (77.2%) and the -2 Log Likelihood value of 265.304 (see equation 3 of Table 5.23 in Chapter Five).

B. Factors Determining Heroin Users Predisposition to Seek Professional Help

This work also asked the question: Why do some heroin users' readily seek professional help and others avoid seeking such help? Answers to this research question were obtained by investigating the influence of demographic, socio-economic, environmental and facility-specific factors on the predisposition of heroin users to seek professional help. Findings of the study revealed that these variables differ in the extent to which they determine heroin users' predisposition to seek professional help.

Notably, though all the factors included in the study did contribute to the explanation of heroin users predisposition to seek professional help, not all were significant. More so, certain variables that were found to be significant using Chi-square analysis were proved to be insignificant in the logistic regression model. The implication is that such relationships were spurious in that inclusion of control variables in the logistic model invalidated their significance as initially confirmed by the Chi-square test.

Among the selected demographic variables marital status was significantly related to heroin users predisposition to seek professional help. The same applies to two socio-economic variables namely occupational status and level of income. Two environmental factors namely

affordability of heroin and peer influence were also significant as well as two facility-specific factors namely success of detoxification and perception of charges. Table 7.2 summarises the major findings of the study on the variables significantly associated to the heroin users predisposition to seek professional help regarding addiction to the drug.

Table 7.2: Main Variables influencing predisposition to seek professional help

Selected Variables	Chi-square (χ^2)	Degrees of Freedom (df)	Significance Level
Demographic			
▪ Marital status	13.171	4	P<0.01**
Socio-Economic			
▪ Occupational status	14.703	6	P<0.02*
▪ Income level	20.552	4	P<0.001***
Environmental			
▪ Affordability of heroin	23.269	4	P<0.001***
▪ Peer influence	10.389	4	P<0.03*
Facility Specific			
▪ Success of detoxification	61.609	6	P<0.001***
▪ Perception of charges	17.716	6	P<0.001***

Note: * P<0.05 **P<0.01 *** P<0.001

Further, logistic regression analysis was introduced to discern which of the factors best predict heroin users predisposition to seek professional help. Results of the analysis showed that only:

Level of income

Peer influence

Counsellor-client relationships were the best predictors of the likelihood of high predisposition of heroin users to seeking professional help. Additionally, it emerged that controlling for facility-specific factors made age a non-critical, while counsellor-client relationship became a critical predictor of the high likelihood of heroin users predisposition to seek professional help. Furthermore, the equation combining all the demographic, socio-economic, environmental and facility-specific factors was the best logistic regression model as indicated by the -2 Log Likelihood value of 195.955 (see equation 3 of Table 5.24 in Chapter Five).

C. Factors Related to the Effectiveness of the Rehabilitation Centres

This section presents summaries, conclusions and implications of the key findings of qualitative analysis regarding the effectiveness of heroin rehabilitation centres. The underlying assumption was that certain factors were responsible for successful heroin users rehabilitation and social reintegration. On the basis of this supposition, some selected input and process indicators of effectiveness, as indicated in Figure 2.2, were used to explain the views of various stakeholders in rehabilitation work. More precisely, the study incorporated effectiveness assessment views from Prison Warders (PWs), Anti-Narcotic Police Officers (ANPO), Rehabilitation Centres Counsellors (RCCs) and Members of Heroin Rehabilitation Management Boards (MHRMBs).

Among the input factors that emerged as significant correlates of the effectiveness of heroin rehabilitation centres and social reintegration of heroin users were institutional management and board support indicators. More precisely, frequency of attending meetings, staff supervision and boards supervisory visits to centres as well as board management relations and

resource utilization were considered to be effective. Importantly, all board support and institutional management factors, except for the status of physical plant, were found to be significant in explaining the effectiveness of the studied heroin rehabilitation centres. The general consensus on the status of the physical plant was that the rehabilitation centers had little space for expansion to enable them accommodate other rehabilitation programmes such as vocational skill training for their patrons.

Similarly, some process factors were viewed as important in explaining the effectiveness of heroin rehabilitation centres in reforming and socially reintegrating heroin users. For example, informants affirmed that heroin rehabilitation centres were effective as measured by successful detoxification and counselling processes. In particular, absence of withdrawal symptoms, adequacy of drugs for anti-heroin therapy and counsellor-client relationship were cited as being effective; while quality of counsellors and high relapse rates were considered barriers to effective rehabilitation of heroin users. Significantly, the reported high relapse rates had negative implications for successful reintegration of heroin users as acceptable and productive participants in their communities.

The poor rating of some of the indicators of effectiveness of heroin rehabilitation centres by the informants was partly due to five major challenges that characterized the operations of the studied heroin rehabilitation centres. First, heroin rehabilitation centres operated under limited financial resources that consisted primarily of donations from well-wishers and fee for service in some of the centres. These finances were inadequate and unreliable to sustain operations of these centres, making the centres ineffective in certain respects.

Second, lack of appropriate drugs for detoxification was a major problem in the studied heroin rehabilitation centres. Informants from these centres suggested that heroin users should be

treated using lower doses of heroin or methadone. Such drugs are illegal in the country and hence their use to treat the addicts would have contravened the Kenyan anti-narcotic legislation. Thus, heroin rehabilitation centres had to rely on alternative drugs such as Diazepam and Valium, among others, to sustain the withdrawal symptoms of their clients. Such drugs, because less effective, made the work of rehabilitation centres very difficult, especially in managing heroin users who had a long history and frequency of use.

Third, most of the rehabilitation centres reported a dearth of professional staff to handle rehabilitation work. Of the five rehabilitation centres studied only one had trained professional counsellors at certificate level. To this effect, volunteers who had undergone in-house or on-the-job training in rehabilitation work ran most of these centres. This problem of personnel had implications for the quality of counselling and rehabilitation processes for the heroin users. This possible explains the high relapse rates reported by informants in these centres.

Fourth, the studied heroin rehabilitation centres lacked space or land for expansion. Field observation confirmed that most of them were operating on less than a quarter of an acre. This had implication for expansion and meeting other rehabilitation goals such as having sporting and vocational rehabilitation facilities for the clients. Indeed, most heroin users felt that they were being caged and were less comfortable due to lack of physical activities to keep them busy during the day. Though some centres provide indoor games, given the youthful nature of most inmates, the value of physical activities in rehabilitation work cannot be gainsaid.

Fifth, all the five heroin rehabilitation centres studied reported high relapse rates among the users they had attempted to rehabilitate. Major reasons given for the high relapse rates included lack of willingness on the part of the inmates to change, parental pressure to change, lack of follow up and lack of vocational rehabilitation programmes. Equally compounding the

situation were availability of heroin in the community and peer pressure from old friends, who were still using heroin themselves. Apparently, high relapse rates had a negative implication for the acceptance and support the studied rehabilitation centres could receive from the community. This is so because high relapse rates do not attract clients to the centres nor does it give persons within the social networks of the addicts some respite.

D. Theoretical and Practical Implications

In this study a number of correlates and predictors of three dependent variables namely frequency of heroin use, predisposition to seek professional help and the effectiveness of heroin rehabilitation centres were investigated. The major findings that emerged have been summarized in the preceding section. In this section, attention turns to the theoretical and practical implications of these key findings. These are presented sequentially below.

(i) Theoretical implications

Three variables were found to be the best predictors of the *likelihood of high frequency of heroin use*. First, educational attainment was found to significantly influence the likelihood of high frequency of heroin use. The influence of educational attainment on the likelihood of high frequency of heroin use provides a challenge to the hypothetical thinking of Abdool et al (1998) and UNDCP (1998). These works suggested that improved educational attainment is associated with reduced drug use. To the contrary, the findings of this study revealed an increasing high frequency of heroin use with rising levels of educational attainment.

The pertinent question to ask is: Why does educational attainment significantly increase the likelihood of high heroin use? Proponents of anti-drug use as reported in Chapter Two of this work, emphasized that heroin is highly addictive. Most likely, therefore, users with certain levels of education and in employment can easily afford to take more of the drug in order to get the

exhilarating effect and avoid the discomfort associated with its absence than the less educated who are unemployed.

Second, it was found that affordability of heroin significantly increases the probability of high frequency of use. This finding suggests that where cost of heroin constitutes a high price, all factors remaining constant, a rational user of heroin would reduce frequency of use. This corroborative finding supported the demand and supply theory presented in Chapter Two of this thesis. One of the principles of this theory is that the higher the price of a commodity, in this case heroin, the lower the demand for it.

Third, peer influence was found to have a significant negative effect on the likelihood of high frequency of heroin use. This finding was contrary to expectation that the stronger the peer influence the higher the likelihood of high frequency of heroin use. In the context of this study where using heroin in groups was prevalent, users tended to limit the amount consumed in order to cater for every member in the group. The finding therefore supported the situational approach theory, which stipulates that behaviour is situationally determined.

Findings regarding *heroin users predisposition to seek professional help* have five implications for theory. First, high level of income was found to be a critical predictor of the likelihood of high predisposition to seek help. It seems that where heroin users have high-income rehabilitation services become more accessible and affordable to them. This finding supports the principles of demand and supply as highlighted in Chapter Two of this thesis.

Second, peer influence was a critical determinant of the likelihood of high predisposition to seek help. Peer influence was operationalized as frequency of heroin use in groups. The finding here suggests that where heroin use is a group activity those involved develop bonds of attachment in their heroin use culture that ultimately determines the decisions individuals make.

Thus, the decision to seek professional help and even the choice of a specific rehabilitation centre will largely depend on the inclination of the larger heroin sub-cultural in-group. This finding offered support to the situational theory, which stipulates that behaviour emanates from a specific social context.

Third, success of detoxification was found to have a positive significant influence on the likelihood of heroin users to seek help. This means that heroin users will be more attracted to centres where detoxification is successful. This implies that heroin users in this study were very rational in making choices regarding which rehabilitation centres they will seek help from. By making a choice of using one centre and not the other based on detoxification assessment, heroin users indicate which factors are critical in shaping their inclination to seek professional help. Thus, in order for heroin centres to attract and sustain more clients they have to improve detoxification services to the satisfaction of the users. The broader suggestion is that services in heroin rehabilitation centres must respond to the needs of the clients.

The finding above, on one hand, contradicts the social systems theory's argument that participants in an organization are constrained to act in a particular way and have little say in the direction of organizational activities. On the other hand, the finding supports the interactionist theory's assertion that external forces do not determine action. Instead, it is directed by the meanings that define social reality within a group context.

Fourth, perception of charges was also found to be a good predictor of the likelihood of high predisposition to seek help. The strong link between high perception of cost of rehabilitation services and the high likelihood of predisposition to seek help can be explained in terms of delayed benefits. Although perceived charges of rehabilitation services may be prohibitive in the short run, if the charges improve the services, then they will not matter much in

the long run. Accordingly, heroin users may eventually interpret high charges as a proxy for improved quality of rehabilitation services. The finding that perception of charges has a positive influence on the inclination to seek help runs counter to the principles of demand and supply theory as detailed in Chapter Two of this work.

Fifth, results of the study indicated that counsellor-client relationship exerted a negative significant influence on the likelihood of high predisposition to seek help. This means that a positive counsellor-client relationship leads to a lower likelihood to seek professional help among studied heroin users. This can be interpreted to mean that where the relationship between counsellors and clients is cordial there is a bond that develops between them. Hence there is reluctance to savour this psychosocial supportive bond forged during rehabilitation. In a sense, therefore, this close relationship perpetuates a sense of dependency among rehabilitated clients.

This finding accords support to the interactionist perspective which asserts that it is necessary to discover the meaning that directs action, in this case counsellor-client relationship. From the interactionist perspective a force external to the actor does not determine meaning. They are created, modified and changed by actors, in this case counsellors and clients, in interaction situations. Instructively, available evidence as presented in Chapter Five of this work corroborates the critical nature of meaning attached to some primary factors such as success of detoxification, peer influence, levels of income and perception of charges in influencing the inclination to seek help. To this end, negative counsellor orientation to clients is less effective as a disincentive in seeking professional help. This explained the co-existence of poor perceptions of clients' by the counsellors and users willingness to seek help.

At another level, apart from analysing heroin rehabilitation centres performance using several theoretical models, this study also demonstrates not only the usefulness of the

Contradictory Model (CM) of organizational effectiveness but also the factors associated with the effectiveness of the heroin rehabilitation centres. Instructively, the study recognized the need to apply theories in combination and not as competing perspectives. To this end, the study's theoretical thrust is in tandem with those of Fligstein (1985), Singh et al (1986), Pfeffer et al (1987), Hamilton et al (1988) and Shauri (2000), that seek wholistic explanations of organizational effectiveness. Accordingly, the study supports the call by Aldrich (1988) and Hall (1991) that researchers should cease being *paradigm warriors* and instead use a combination of theories in understanding organizational behaviour in the management of fundamental social problems.

(ii) Practical implications

At the practical level, three (3) striking implications of the study findings are worth noting. First, the high patterns of frequency of heroin use and predisposition to seek professional help revealed by this study demonstrate the need for interventions to mitigate the dangers of heroin use habits. This can be achieved through cooperation of various stakeholders in sensitizing the public about the dangers of the drug. Such public sensitization may be fostered through incorporation of heroin use issues in the school curricula, community awareness initiatives and promotion of the exchange of drug information among the police, prison, medical and rehabilitation staff.

Second, the finding that demand for heroin rehabilitation services is overwhelming despite the lack of a legal framework for their operations has diverse implications. Lack of a legal framework provides a conducive environment for the mushrooming of more illegal heroin centres as practitioners seek to exploit the advantages such opportunities may present. Providers are more likely to use the gap in legislation to make more profits by exploiting the users, while the clients will attempt to seek for professional help for their predicaments regardless of the

risks involved. In this regard, a legal framework for the operations of heroin rehabilitation centres is not only necessary but also urgent to guard against malpractices and enhance professionalism. Further, it will reduce apprehension and promote collaboration among the different stakeholders such as the police, prison, medical and rehabilitation personnel in the treatment processes.

Third, currently the police consider heroin users as criminals while the medical personnel working in the psychiatric wings of hospitals regard them as psychotic patients. Both approaches stigmatise and discriminate against the addicts thereby hindering their access to essential rehabilitative care. In other words, in order to have viable heroin rehabilitation centres there is need for organizational and structural reforms. Further, this study established that the efforts of the police, prison, medical officers and those of rehabilitation staff in helping heroin users were fragmented partly due to lack of a legal framework to harmonise their operations. The finding that heroin rehabilitation centres can be a viable option for recovery and social reintegration of the addicts when streamlined is a milestone. Thus, there is need to empower the state agency (NACADA) legally, technically and financially to strengthen and streamline heroin rehabilitation centres operations in the country.

E. RECOMMENDATIONS

Although NACADA is the government agency mandated to offer drug rehabilitation services, including heroin by Kenya Gazette Notice No. 2841 of 2001, it has not been able to do so. The bulk of these services have continued to be offered by Civil Society Organizations (CSOs) in particular NGOs, private individuals, religious bodies and the community. This dominance of drug rehabilitation work by the CSOs has continued against a backdrop of lack of a legislative framework for their operations in the country. The administration of heroin

rehabilitation services by CSOs contrary to policy has continued in spite of the government realisation that there is high demand for the services. Legal framework notwithstanding, this study has not only demonstrated the viability of heroin rehabilitation centres but has also provided information on the factors that influence frequency of heroin use and predisposition to seek professional help.

This section presents the study recommendations intended to lower the high frequency of use, promote high predisposition by heroin users to seek professional help and make heroin rehabilitation centres more effective in recovery and social reintegration. Accordingly, two sets of recommendations namely those touching on policy and those on identified gaps in research are made in the sections that follow.

1. Policy Recommendations

Four (4) major areas of policy concern can be suggested from the study findings as follows:

(a) Operative legal framework

Drawing from the study findings that heroin rehabilitation centres are operating without a legal framework, it is recommended that:

- A legal framework for the operation of heroin rehabilitation centres is put in place by the state as a mechanism to guard against malpractices and enhance professionalism.

Additionally, the study revealed that Kenyan law criminalises the use of conventional approaches of detoxifying heroin users such as administration of lower doses of heroin or use of methadone treatment thus making it difficult for counsellors to manage the withdrawal symptoms experienced by their clients. Against this background it is recommended that:

- Legal reforms are undertaken by the judiciary to legalise the use of various medically efficacious anti-heroin therapies.

(b) Mitigating frequency of heroin use and predisposition to seek help

This study has established that there is a high demand for the services of heroin rehabilitation centres. This demand exists against a background of limited space for expansion and a dearth of professional counsellors in these centres leading to high relapse rates. In light of these issues it is recommended that:

- Heroin rehabilitation centres be assisted with financial and material resources by various stakeholders to facilitate expansion of their services.
- Heroin rehabilitation centres be empowered through financial and material support to recruit and train professional staff.

(c) Structural and organizational reforms

This study has shown that heroin rehabilitation centres can be viable options in facilitating recovery and social reintegration when strengthened. However, their management by CSOs and psychiatric wings of the Ministry of Health hospitals or the prison department compromises the status of the clients. Given this truncated management structure and its deleterious consequences for clients it is recommended that:

- NACADA take charge of all rehabilitative issues related to drug addiction, including heroin as a means of streamlining heroin rehabilitation operations and processes in the country.

(d) The need for understanding the danger

The study revealed that heroin users were aware of their high frequency of use of the drug but at the same time were very ready to seek professional help. In other words, they were aware that use of heroin is dangerous. In light of this it is recommended that:

- The government through the Ministry of Health and NACADA should mount sensitization programmes for counsellors, heroin users and the general public to promote understanding of the dangers of heroin use. The campaigns should mostly target the youth, who are the majority users of heroin as confirmed by this study.
- Information on the dangers of drug, including heroin be incorporated in the school curricula at all levels of education to sensitize youth on the need for responsible behaviour.

In addition, it emerged from the study that although many counsellors in rehabilitation centres were not trained, some of them shared drug abuse information across the centres.

Given this scenario it is recommended that:

- NACADA and the Ministry of Health mount regular joint seminars among the staff from different centres on drug abuse promoting their continued exchange of drug abuse information.

2. Further Research

Drawing from the findings of the study, six issues are recommended for further research. First, to build on existing works it is suggested that more studies be conducted on the effectiveness of heroin rehabilitation centres, especially those incorporating other indicators such

as programme implementation, supervision and monitoring, staff attitudes towards their work or their clients and management of resources among others.

Second, more investigations on the effectiveness of heroin rehabilitation centres are needed to answer emerging and other research questions not considered in this study. For instance, what information systems are necessary conditions for effective heroin rehabilitation centres? Why is it that some rehabilitated heroin users can easily be integrated into the community than others? Why is it that some rehabilitated heroin users readily relapse than others? And what conditions are necessary for successful social reintegration?

Third, the effectiveness of heroin rehabilitation centres and its various measurement indicators may change from time to time. Change and continuity in the effectiveness of heroin rehabilitation centres need to be studied longitudinally or using time series studies to determine the pattern of evolution of such centres. This will be very handy in continuously updating our sociological understanding of the changing trends in effectiveness of heroin rehabilitation centres. Such studies would also enable the monitoring and identification of the direction in the development of heroin rehabilitation centres in Kenya and provide insights for their improvement.

Fourth, more studies are needed with respect to other background, socio-economic, environmental and facility-specific factors with regard to frequency of heroin use and predisposition to seek professional help. The rationale behind this is that the study found out that most of the factors included for analysis were weakly associated to frequency of heroin use and predisposition to seek professional help.

Fifth, there is need for more investigations to document pattern of frequency of heroin use and predisposition to seek professional help among heroin users in different areas of Kenya. Studies of a comparative nature are highly recommended in this area.

Sixth, other hard drugs such as cocaine, morphine, and hashish to mention but a few should be studied to determine the extent of their use, frequency of use, inclination to seek help and effectiveness of rehabilitation programmes dealing with users of such drugs. Importantly, a study to explore whether there is a link between the use of some of these drugs and heroin is recommended.

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APPENDIX I

INTERVIEW SCHEDULE FOR HEROIN USERS

Serial Number:.....

Time Started:.....

A. Background Information

1. Sex: 1. Male 2. Female

2. When were you born?

3. What is your marital status?

1.	Single		2.	Married	
3.	Separated		4.	Divorced	
5.	Widowed		6.	Other specify?	

4. Have you ever been to school?

1.	Yes		2.	No	
----	-----	--	----	----	--

5. Do you know how to read and write?

1.	Yes		2.	No	
----	-----	--	----	----	--

6. What is the highest level of education you attained?

1.	None		5.	O-Level	
2.	Std. 1-4		6.	Level A-Level	
3.	Std. 5-8		7.	University	
4.	Form 1-2		8.	Other specify	

7. (a) Do you have children of your own that you rear?

1.	Yes		2.	No	
----	-----	--	----	----	--

7. (b) If yes, how many are:

		No.
1.	Under school age	
2.	In primary	
3.	In secondary school	
4.	In college and university	
5.	In employment	
6.	Other specify?	

8. (a) Do you raise other children?

1. Yes		2. No	
--------	--	-------	--

8. (b) If yes, how many are:

		No.
1.	Under school age	
2.	In primary	
3.	In secondary	
4.	In college/University	
5.	In employment	
6.	Other specify	

9. Is your mother:

1.	Single	
2.	Living together with your father	
3.	Widowed	
4.	Separated	
5.	Divorced	
6.	Other specify?	

10. What is your main occupation?.....

11. Within which of the following income does your monthly income falls:

Codes	Income in Kshs.	
1.	0 – 999	
2.	1,000 – 1,999	
3.	2,000 – 2,999	
4.	3,000 – 3,999	
5.	4,000 – 4,999	
6.	5,000 – 5,999	
7.	6,000 – 6,999	
8.	7,000 – 7,999	
9.	8,000 – 8,999	
10.	9,000 – 9,999	
11.	10,000 and above	

B. Drug Use Profile

12. Indicate which of the drugs below you have used and for how long?

Drugs	Duration of use in years	Using Now	
		1:Yes	2:No
Tobacco		1	2
Alcohol		1	2
Cannabis		1	2
Heroin		1	2
Cocaine		1	2
Psychotropics (LSD)		1	2
Methaqualone		1	2
Other specify		1	2

13. How old were you when you first used any of the drugs listed above?

14. Which among them was the first drug you used?

15. Why did you use it?

16. Which among the above drugs do you use frequently?

17. State how frequently do you normally use drugs?

1.	Once a day	
2.	Twice a day	
3.	Thrice a day	
4.	More than 3 times a day	
5.	Other specify	

18. For the drugs you use frequently in what form do you use them?

19. How do you mainly get the drugs?

1.	Chemist	
2.	Dealer/Pusher	
3.	Friends	
4.	"Maskan" (Den)	
5.	Other specify	

C. Heroin Use

20. Have you been using heroin at least since last year?

1.	Yes		2.	No	
----	-----	--	----	----	--

21. How old were you when you first used heroin?

22. Why did you use heroin?

.....

23. (a) Are you using heroin now?

1.	Yes		2.	No	
----	-----	--	----	----	--

23. (b) If yes, why are you using heroin now?

.....

24. Do you use heroin/brown sugar?

1.	Alone	
2.	With the company of friends	
3.	Both	

25. If with friends, how frequently do you use heroin with them?

26. State how frequently do you normally use heroin?

1.	Once a day	
2.	Twice a day	
3.	Thrice a day	
4.	More than 3 times a day	
5.	Other specify	

27. State your main source of heroin.

1.	Chemist	
2.	Dealer/Pusher	
3.	Friends	
4.	"Maskan" (Den)	
5.	Other specify	

28. Rate the availability of heroin in your area:

1.	Readily available	
2.	Frequently available	
3.	Sometimes available	
4.	Not available	

29. How much do you pay for a dose of heroin?.....

30. Rate the financial cost of heroin in your area:

1.	Very cheap	
2.	Cheap	
3.	Expensive	
4.	Very expensive	

31. Where do you consider your main place of heroin intake?.....

32. What is your major mode of use?

1.	Sniffing		2.	Smoking	
3.	Injection		4.	Chasing the dragon	
5.	Swallowing		6.	Other specify	

C. Facility Specific Factors

33. State the treatment services attended?

34. State the rehabilitation services attended?.....

35. In the last one-year how often have you sought treatment?

1.	1-2 times	
2.	3-4 times	
3.	5-6 times	
4.	7-8 times	
5.	9-10 times	
6.	10 (+) times	

36. In the last one-year how often have you sought rehabilitation?

1.	1-2 times	
2.	3-4 times	
3.	5-6 times	
4.	7-8 times	
5.	9-10 times	
6.	10 (+) times	

37. Give the type of facility you used and reason for use:

	Type of facility used	Reason for use	Type of service received
1.			
2.			
3.			
4.			
5.			

38. What is your feeling(s) about the service(s) received?

.....

39. Was the treatment:

1.	Effective		2.	Not effective	
----	-----------	--	----	---------------	--

40. Was the rehabilitation:

1.	Successful	
2.	Indeterminate	
3.	Not successful	

41. Rate your willingness to be treated:

1.	Very willing	
2.	Willing	
3.	Doubtful	
4.	Unwilling	

42. Rate your willingness to be rehabilitated:

1.	Very willing	
2.	Willing	
3.	Doubtful	
4.	Unwilling	

43. Rate your frequency of seeking help:

1.	Very frequently	
2.	Frequently	
3.	Rarely	
4.	Very rarely	

44. Rate your frequency of attending counseling sessions:

1.	Very frequently	
2.	Frequently	
3.	Rarely	
4.	Very rarely	

45. In your opinion, how would you rate the following attributes of a rehabilitation centre you know?

Attributes	1. Excellent	2. Good	3. Fair	4. Poor	5. Very Poor
Quality of meals.	1	2	3	4	5
Adequacy of meals.	1	2	3	4	5
Client-counselor relationship.	1	2	3	4	5
Counselor-client relationship	1	2	3	4	5

46. Rate the success of detoxification you received in this facility:

1.	Very successful	
2.	Successful	
3.	Satisfactory	
4.	Not successful	

47. In your opinion, how would you rate your perception of your wellness after the anti-heroin therapy?

1.	Very well	
2.	Well	
3.	Satisfactory	
4.	Not well	

48. How can you rate your perception of charges in this facility?

1.	Very expensive	
2.	Expensive	
3.	Reasonable	
4.	Cheap	

49. How do the factors listed below influence your decision to use a specific rehabilitation centre?

Attributes	1. Very much	2. Much	3. Not much	4. Not at all
Success of detoxification	1	2	3	4
Perceived wellness after anti-heroin therapy	1	2	3	4
Perceived affordability of charges	1	2	3	4
Quality of meals	1	2	3	4
Adequacy of meals	1	2	3	4
Client-counselor relationship	1	2	3	4
Counselor-client relationship	1	2	3	4

50. According to you, name any three most important factors that can improve the services you received at the centre?.....

51. What do you suggest should be done to help you become an accepted member of society?.....

Time interview ended:.....

Thank You for Your Cooperation.

APPENDIX II

A FOCUS GROUP DISCUSSION GUIDE FOR COUNSELLORS AND BOARD
OFFICIALS OF HEROIN REHABILITATION CENTRES

Time Started:

A. Identification

Centre Name:

FGD No:

Composition:

Position:

- 1.
- 2.
- 3.
- 4.
- 5.

B. Background Information

1. When was the rehabilitation centre started? (**Probe for how started?**)
2. How many members does the board have? (**Probe for..**)
Professions and
Mode of appointment
3. How can you rate their frequency of visits to the centre?
4. Comment on their frequency of attending board meetings.
5. What are the board's goals? (**Probe for the achievement of the goals**)
6. How can you describe the boards' management relations (**Probe for..**)
Themselves
Staff and
Clients

7. How can you rate the performance of the board with regard to supervision of the facility?
8. Does your rehabilitation centre charge user fees? **(Probe for exact charges)**
9. What can you say about the collection of the revenue? **(Probe for other sources of funds)**
10. Who controls the expenditure of the centre?
11. How well are the funds being spent? **(Probe for..)**
 Diversions
 Misuse and
 How handled?)
12. Does the institution audit its account?
13. What types of services are offered by this facility?
14. Comment on the frequency of supervision by the staff of the activities at the centre?
15. What can you say about drug availability for detoxification at the centre?
16. Describe withdrawal symptoms on addicts who have received treatment?
17. How frequent are counseling sessions? **(Probe for..)**
 Professional training
 Effectiveness of the sessions
18. What are the staff attitudes towards their work?
19. How is the client-counselor relationship like? **(Probe for counselor-client relationship)**
20. Comment on the relapse rate of those you have rehabilitated at the centre? **(Probe for needs)**

21. In your opinion, rate how satisfactorily the addict's have performed their social roles in the community after rehabilitation?
22. What are the community's reactions towards the recovering addicts?
23. What can you say about the status of the centre's physical facilities (**Probe for..**)
Appropriateness
Cleanliness and
Maintenance
24. Give suggestions of how to improve rehabilitation of the heroin addicts? (**Probe for social integration**)

Time dscussion ended:.....

Thank You for Your Cooperation.

APPENDIX III

IN-DEPTH INTERVIEW GUIDE FOR POLICE, PRISON AND MEDICAL PERSONNEL

A: Identification:

Interview identification No.....Date.....Time
Started.....

District.....

Institution.....

Designation.....Sex.....

B: Drug Abuse Information

1. How do you assess drug abuse situation in this district?

.....
.....

2(a) What types of illicit drugs are being used in this district?

Checklist

- Cannabis
- Heroin/Brown Sugar
- Cocaine
- Psychotropic (LSD)
- Methaqualone
- Other specify

2(b) How wide spread is the use of:

- (i) Alcohol:.....
- (ii) Tobacco.....
- (iii) Khat.....

3 Name three most abused drugs in the district in order of priority:

- (i).....
- (ii).....
- (iii).....

4. Where do those who abuse drugs get them?.....
5. How wide spread is the use of heroin in this district?.....
6. How readily available is heroin in this district?.....
7. Comment on the price charged for heroin among the users in the district (**Probe for..**)
 - (i) Affordability:.....
 - (ii) Differences by locality:.....
8. What measures are in place to reduce heroin abuse in the district?

Comment on the success of these measures in reducing heroin use?

9. Do you know of any heroin rehabilitation centres? (Probe for names..)

10. If yes, comment on the success of these centres with regard to:
- (i) Treatment:.....

 - (ii) Advice.....

 - (iii) Making former addicts useful members of the
 community:.....
 - (iv) Prevention of getting back on heroin
 use:.....

11. Suggest ways that can successfully reduce drug abuse in this district:
- (i).....
 - (ii).....
 - (iii).....
 - (iv).....

12. Do you have any other comments to make about the issue of drug abuse in Kenya?

Time interview ended.....

Thank you very much for your cooperation.