

**PREVALENCE OF SUBSTANCE ABUSE AMONG FORENSIC
PSYCHIATRY INPATIENTS AT MATHARI HOSPITAL,
NAIROBI, KENYA.**

**A DISSERTATION IN PART FULFILMENT FOR THE AWARD
OF THE DEGREE OF MASTER OF MEDICINE IN
PSYCHIATRY OF THE UNIVERSITY OF NAIROBI.**

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DECLARATION

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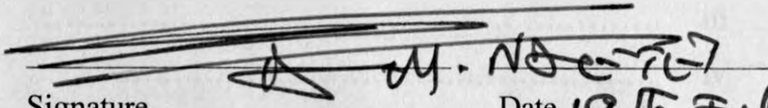
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ABBREVIATIONS AND ACRONYMS

1. AUDIT : Alcohol Use Disorder Identification Test
2. APQ : Alcohol Problem Questionnaire
3. ASSIST : Alcohol , Smoking and Substance Involvement Screening Test.
4. DSM –IV : Diagnostic and Statistical Manual (4th Edition).
5. ICD – 10 : International Classification of Diseases (10th Edition).
6. KNH : Kenyatta National Hospital
7. LSD : Lysergic Acid Diethylamide.
8. MSU : Maximum Security Unit.
9. NACADA : National Agency for the Campaign Against Drug Abuse
10. SADQ : Severity of Alcohol Dependency Questionnaire.
11. SANS : Scale for the Assessment of Negative Symptoms
12. SAPS : Scale for the Assessment of Positive Symptoms
13. SCID : Structured Clinical Interview for DSM – IV.
14. SDS : Severity of Dependence Scales.
15. SPSS : Statistical Package for Social Sciences.
16. UNODC : United Nations Office on Drugs and Crime
17. U.S. : United States (of America)
18. WHO : World Health Organization.

CHAPTER 1: ABSTRACT

Introduction: Psychiatric patients with both major mental illnesses and substance abuse disorders have more extensive criminal histories and demonstrate a higher level of risks and needs when compared with patients with major mental illness alone. Despite the growing awareness of the unique needs of psychiatric patients with co-occurring substance abuse disorders (i.e. dual diagnosis), little work has been done in Africa, and Kenya in particular to investigate the prevalence and implications of dual diagnosis in forensic psychiatry patients.

Objectives: To determine the prevalence of substance abuse, associated sociodemographic characteristics, other psychiatric comorbidity and relationship between substance abuse and nature of index offence among forensic psychiatry inpatients at the Maximum Security Unit (MSU), Mathari Hospital, Nairobi, Kenya.

Design: A cross-sectional population study using entire population of the Maximum Security Unit who satisfied the inclusion criteria was used.

Setting: The study was carried out at Mathari Hospital, Nairobi, Kenya.

Methods: The study sample comprised of 135 forensic inpatients who met the inclusion criteria. They were interviewed using structural instruments to collect sociodemographic and substance use information (ASSIST) as well as to make psychiatric co-diagnoses based on DSM-IV^{TR} (SCID). Descriptive and inferential analysis was done using the Statistical Package for Social Sciences (SPSS) Version 11.5 and results presented in narratives and tables.

Results: The 135 participants were aged between 18 and 84, mean age being 37 years. One hundred and eighteen (87.4%) were male and majority were single (51.1%) or married (28.9%). The highest percentage resided in Eastern province (29.6%) and Central province (25.2%) before arrest, and most were Protestant (45.2%) or Catholic (41.5%). Majority of the participants (54.8%) had attained primary level as their highest level of education with 44.4% being unemployed and 27.4% being in the informal employment sector. A family history of mental illness was found in 26.5%. Sixty-seven (51.1%) had history of previous admission and majority of these (77.9%) had been admitted for months. Most previous admissions were civil in nature (56.5%). The study population had a substance abuse prevalence rate of 74.8%, tobacco products being the most frequently abused substance (58.5%), followed by alcoholic beverages (48.1%) and cannabis (31.9%), amphetamine-type stimulants (23.0%), caffeine (3.0%), sedatives (3.0%) and cocaine and inhalants 2.2% each.

Violent offences were the most commonly occurring index offence (68.1%) followed by criminal damage (18.5%), sexual offences (8.1%) and theft and handling of stolen goods (5.2%). Psychiatric comorbidity was found to be Depressive episodes 46.2%, Schizophrenia 42.3%, Past episodes of Mania 17.6% and Dysthymic disorder 15.3%.

There was a statistically significant association ($p < 0.05$) between substance abuse and sex/gender ($p = 0.002$), occupation ($p = 0.036$) and nature of previous admission ($p = 0.029$) whereas there was no association ($p > 0.05$) between substance abuse and age, residence, religion, highest level of education, marital status, family history of mental illness, history of previous admission, number of previous admissions and duration of previous admissions.

There was a statistically significant association ($p < 0.05$) between nature of index offence and the use of tobacco ($p = 0.033$) and amphetamine-type stimulants ($p = 0.009$). However, there was no statistically significant association ($p > 0.05$) between substance abuse in general and nature of index offence.

Conclusions: Firstly, there is a high prevalence of substance abuse (74.8%) among forensic psychiatry inpatients at MSU, Mathari Hospital, Nairobi, the most commonly abused substance being tobacco products. This coupled with low screening rates could have an important impact on the quality of treatment provided, including missing opportunities for substance abuse intervention.

Secondly, it is universally agreed that majority of mentally-ill patients who are receiving appropriate treatment do not carry a greater risk of violence than the general population. However, major determinants for violence were found to include: sociodemographic (male gender) and socioeconomic factors (low levels of employment) as well as substance abuse (particularly of tobacco products and amphetamine-type stimulants).

Thirdly, early identification and treatment of substance use problems in the mentally ill can thus significantly reduce the risk of violence.

Finally, depressive illness is the most common co-occurring major mental disorder in the forensic inpatients and its comorbid existence with substance abuse must be actively sought out and treated.

Recommendations: Firstly, staff in mainstream and forensic mental health services, particularly admitting psychiatrists, urgently need training in detecting and managing substance abuse. "To

overlook or neglect substance abuse in the course of mental health treatment will result in poor treatment outcome.”⁵⁵

Secondly, rehabilitative services need to be expanded to accommodate the large number of forensic patients with substance abuse problems. Setting up a rehabilitation ward/unit within the Maximum Security Unit would go a long way to this end.

CHAPTER 2: INTRODUCTION

2.1 BACKGROUND

The World Health Organization, since its founding in 1948, has played a leading role in supporting countries to prevent and reduce the problems due to psychoactive substance use, and in recommending which psychoactive substances should be regulated.

In 2000, the Department of Substance Abuse was merged with the Department of Mental Health to form the Department of Mental Health and Substance Abuse, reflecting the many common approaches of management of mental health and substance use disorders.

WHO deals with all psychoactive substances, regardless of their legal status. Its mandate in the area of psychoactive substance use includes:

- Prevention and reduction of the negative health and social consequences of psychoactive substance use;
- Reduction of the demand for non-medical use of psychoactive substances;
- Assessment of psychoactive substances so as to advise the United Nations with regard to their regulatory control.

The management of Substance Abuse Team (MSB) is one of the four teams under the working umbrella of the Department of Mental Health and Substance Abuse and the cluster of Non communicable Diseases and Mental Health.

The Management of Substance Abuse Team is concerned with the management of problems related to the use of all psychoactive substances. It emphasizes the development, testing and evaluation of cost-effective interventions for substance use disorders as well as the generation, compilation and dissemination of scientific information on substance use and dependence, their health and social consequences. It supports countries in advocacy and capacity building for the prevention and management of substance use disorders in all vulnerable groups.

In Kenya, like the rest of the world, the use and abuse of psychoactive substances is steadily increasing as may be deduced from media reports (both electronic and print).

Vulnerable groups in our setting include the youth (both primary and secondary school-going, university and college students), women and people with mental health problems.

Substance abuse is of particular concern in forensic mental health services as it increases the risk of crime, particularly theft and violence. (Miles, Helen et al)¹

The increased rates of offending found in those with schizophrenia and major affective disorders is largely accounted for by the minority of such patients who have substance abuse problems.²

In practice, both preventing initial offending and preventing recidivism in the seriously mentally disordered depends on effectively managing the comorbid substance abuse.²

2.2 SUBSTANCE ABUSE

A clear understanding of the standard definitions of terminologies commonly used in this area of study is paramount.

The World Health Organizations defines a **Drug**³ as a term of varied usage. In medicine, it refers to any substance with the potential to prevent or cure disease or enhance physical or mental welfare, and in pharmacology to any chemical agent that alters the biochemical physiological processes of tissues or organisms.

Hence a drug is a substance that is, or could be, listed in pharmacopoeia. In common usage, the term often refers specifically to psychoactive drugs, and often, even more specifically, to illicit drugs, of which there is non-medical use in addition to any medical use. Professional formulations (e.g. “alcohol & other drugs”) often seek to make the point that caffeine, tobacco, alcohol and other substances in common non-medical use are also drugs in the sense of being taken at least in part for their psychoactive effects.

A Psychoactive substance³ or drug is a substance that, when ingested, affects mental processes e.g. cognition or affect. This term and its equivalent, psychotropic drug, are the most neutral and descriptive terms for the whole class of substances, licit or illicit, of interest to drug policy.

“Psycho-active” does not necessarily imply dependence-producing, and in common parlance, the term is often left unstated as in “drug use” or “substance abuse”.

Substance abuse is a term in wide use but of varying meaning. In DSM-IV^{TR6} psychoactive substance abuse is defined as “a maladaptive” pattern of substance use leading to clinically significant impairment or distress, as manifested by one (or more) of the following, occurring within a 12-month period: (1) recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home (e.g. repeated absences or poor work performance related to substance use; substance-related absences, suspensions or expulsions from school; neglect of children or house-hold), (2) recurrent substance use in situations in which it is physically hazardous (e.g. driving an automobile or operating a machine when impaired by substance use), (3) recurrent substance-related legal problems (e.g. arrests for substance-related disorderly conduct), (4) continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (e.g. arguments with spouse about consequences of intoxication, physical fights). In other contexts abuse has referred to non-medical or unsanctioned patterns of use, irrespective of consequences. Thus the definition published in 1969 by the WHO Expert Committee on Drug Dependence was “persistent or sporadic excessive drug use inconsistent with or unrelated to acceptable medical practice”⁴

Drug Dependence as a general term, is a need for repeated doses of the drug to feel good or avoid feeling bad. In DSM-IV^{TR6}, dependence is defined as “a maladaptive” pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period :

1. tolerance as defined by either of the following;
 - a) A need for markedly increased amounts of the substance to achieve intoxication or desired effect
 - b) Markedly diminished effect with continued use of same amount of the substance
2. withdrawal, as manifested by either of the following:
 - a) The characteristic withdrawal syndrome for the substance

- b) The same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms
3. The substance is often taken in larger amounts or over a longer period than was intended
4. There is a persistent desire or unsuccessful efforts to cut down or control substance use
5. A great deal of time is spent in activities necessary to obtain the substance (e.g. visiting multiple doctors or driving long distances), use the substance (e.g. chain- smoking), or recover from its effects
6. Important social, occupational, or recreational activities are given up or reduced because of substance use
7. The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g. current cocaine use despite recognition of cocaine-induced depression, or continued drinking despite recognition that an ulcer was made worse by alcohol consumption)

Dependence refers to both physical and psychological elements.

Psychological or psychic dependence refers to the experience of impaired control over drinking or drug abuse (craving, compulsion), while physiological or physical dependence refers to tolerance and withdrawal symptoms (neuroadaptation).

Tolerance refers to a decrease in response to a drug dose that occurs with continued use.

Increased doses of alcohol or other drugs are required to achieve the effects originally produced by lower doses.

Substances that are commonly abused may be broadly classified into the following categories:

(i) Psychodepressants:-

These include,

- (a) Alcohol
- (b) Opiates e.g. opium, morphine, pethidine, heroin .
- (c) Sedative-hypnotics e.g. barbiturates, benzodiazepines.
- (d) Inhalants e.g. volatile anaesthetics like ether, chloroform and halothane.

(e) Organic solvents e.g. acetone, gasoline, aerosol propellants, glue.

(ii) Psychostimulants:-

(a) Amphetamines e.g. dexamphetamine, amphetamine, methylamphetamine, methylphenidate and phenfluramine.

(b) Cocaine

(c) Khat (miraa)

(d) Caffeine

(e) Nicotine (tobacco)

(iii) Hallucinogens:-

(a) Lysergic Acid Diethylamide (LSD)

(b) Psilocybin

(c) Scopolamine Phencyclidine ("Angel dust")

(d) Mesacaline

2.3 FORENSIC PSYCHIATRY

Forensic Psychiatry is a specialized branch of psychiatry where the medical and legal worlds overlap.⁵ It is a fascinating subspecialty that involves the application of medical psychiatric expertise in legal contexts.

The field is comprised of three distinct but overlapping areas that deal with different issues.⁵

The first is forensic psychiatry per se, which deals with criminal areas such as Expert Witness Testifying, Dangerous or Long Term Offender Applications, Fitness to Stand Trial, Probation and Parole, and Review Boards. It also deals with civil areas which include Divorce and Custody Evaluations, Negligence and Malpractice, Personal Injury, Workman's Compensation Boards and Workplace Violence.

The second area is Clinical Criminology concerned with such areas as Development Delay issues within the forensic mental health framework, Impulse Control Disorders, Interpersonal

Violence, Major Mental Illness within the forensic framework (psychosis, schizophrenia, mood disorders, etc), Paraphilias and Sex-offending, Personality Disorders within forensic mental health framework, Psychopathy, Substance Abuse within the forensic mental health framework, Risk Assessment and Risk Management and Treatment Programming within the forensic health framework.

The third area has to do with psychiatry and the law. It deals with Capacity (to consent to treatment, to manage property, to consent to emergency treatments etc), Community Treatment Orders, Consent (informed consent to treatment, etc), Confidentiality of Patient Records, Duty of Care, Duty to Warn, Involuntary Hospitalization, Mental Health Act in general, Patient Rights under the Mental Health Act and Substitute Decision Making.

A forensic psychiatrist who is a fully trained psychiatrist with at least one additional year of training and study specifically in Forensic Psychiatry works in this area. He works with a number of other professionals such as forensic psychologists, social workers, nurses, psychometric therapists, recreational therapists, occupational therapists, behavioural therapists and others to look after forensic patients / Clients of the forensic mental health system. By definition forensic patients are those who have been referred by the courts for assessments or who have been declared as Not Criminally Responsible or Unfit to stand trial by the Criminal Justice System and admitted to a provincial forensic mental health system⁵. This correctly describes the study subjects targeted for this study. These patients have been sent to the Mathari Hospital forensic unit for assessment (pre-trial) or rehabilitation/ re-integration after a court finding of Not Criminally Responsible.

Some forensic clients on the other hand, are outside of the hospital system although in most cases, they are in contact at some level with the judicial system. They may be on probation, may be on parole from the correctional system, may be otherwise involved in the criminal legal process (e.g. charged with a criminal offence, on trial etc), or they may be involved in the civil legal process or custody and access issues (insurance claims and /or disputes, workplace issues, dispute resolution, competence issues etc).

Thus, the area of Forensic Mental Health is an area that must address the special needs of mentally disordered offenders, the justice sector and the community, while providing effective assessment, treatment and management (rehabilitation & re-integration into community) of forensic patients in appropriately secure settings.

The offending of most forensic mental health inpatient and community clients is influenced by their mental disorders (which in turn is quite frequently influenced by substance abuse).² The symptoms of the mental disorders are only occasionally the sole explanation of the offending, but are frequently the necessary, if not sufficient cause. Good treatment with good control of symptoms therefore equates to reducing or removing the risks of re-offending. The level of substance abuse among inpatient and community clients indicates that appropriate treatment must be incorporated in the overall treatment plan of those with a history of such abuse.

2.4 DUAL DIAGNOSIS

Literature shows mental disorders to be significantly related to alcohol and drug use disorders.⁷ The strongest associations involve externalizing mental disorders and alcohol / drug dependence.

Mental disorders are associated with alcohol /drug abuse, problems among users, dependence among problem users, and persistence among people with lifetime dependence. These dual diagnoses are associated with severity and persistence of both mental and alcohol / drug disorders.

A wider range of mental disorders is associated with nicotine dependence. Most people with dual diagnosis report their mental disorder occurred at an earlier age than their first substance disorder.⁷

Prospective studies confirm this temporal order, although significant predictive associations are reciprocal. Analyses comparing active and remitted mental disorders suggest that some primary

mental disorders are markers and others are causal risk factors for secondary substance use disorders.

This vulnerability frequently arises by virtue of their disorder – impressionability, impaired judgment and impulsivity are not uncommon traits among the mentally disordered.²

In the case of sex-offenders, there is a predisposition to substance abuse through the need to self-medicate social anxiety and enhance sexual performance.

Mentally disordered offenders who have a concurrent personality disorder (especially antisocial), are particularly vulnerable to substance abuse, as part of a more general pattern of recklessness, impulsivity and anti-authoritarian behaviour.

The vulnerability of those with a mental disorder also probably reflects, in part, the deprivations and decreasing opportunities for work, and normal social activities in those disabled by illness. It may also reflect attempts at self-medication to overcome symptoms of illness and self-medication to overcome side effect of medications, particularly the side effects of anti-psychotic drugs.

Contact with the criminal justice field similarly exposes the vulnerability of mentally disordered people. A large majority of forensic mental health patients and clients have had substantial contact with the criminal justice system, which generally, as a matter of course, brings them into contact with other substance abusers.

These contacts are often retained when they are released into the community. There is also the ever-present danger that the mentally disordered in the criminal justice system, and to a lesser extent in the community, will fall victim to the tactics of drug dealers.

2.5 JUSTIFICATION

Substance abuse among the mentally ill is not only destructive to them, but it also potentially increases the risk to the entire community as it increases the probability of violence and crime.

It is an increasingly important issue in the management of inpatients, even in secure units where visitors to secure units may be a source of illegal drugs and alcohol as described by Williams & Cohen in 2000.⁸

In the Kenyan setting, studies have been done on substance abuse among the youth: Dhadphale et al, 1982¹³ and Yambo and Acuda , 1983¹⁵ studied the problem in secondary schools , as did Kuria MW , 1996.¹⁰

Kenyan children were studied by Othieno CJ, Obondo AA and Kathuku DM, 2000¹⁵ while Mathai AM , 1989⁹ looked at the substance abuse problem in university students.

Mburu J M, 1988¹² studied the alcohol-related disabilities of patients attending a casualty department and Ndetei et al, 1997¹⁷ studied the economic – social - political aspects of illicit drug use in Kenya.

The National Agency for the Campaign Against Drug Abuse (NACADA), 2004³⁶ reported the findings of a national survey on drug abuse including tobacco and alcohol use .

The researcher has not come across any published studies done in the Kenyan forensic population that focused specifically on substance abuse.

This study aims to establish the magnitude of the problem in the forensic inpatients at Mathari Hospital, Kenya's main teaching and referral mental hospital, compare this with the situation in forensic units elsewhere and possibly recommend effective forensic mental health services (aimed at assessment, treatment, rehabilitation and re-integration of these patients) to the relevant policy-makers.

CHAPTER 3: LITERATURE REVIEW

3.1 THE KENYAN SITUATION

Studies done so far in Kenya indicate that substance abuse is on the increase. A varied number of substances are now available with the youth being the most vulnerable group to this new trend.

The major substances being abused in Kenya are alcohol, tobacco, cannabis (marijuana or bhang), khat (miraa) and to a lesser extent tranquilizers and volatile solvents (glue, petrol).

Most studies done in Kenya that relate to substance abuse have been done on the youth.

Dhadphale M et al¹³ 1982 in their study of substance abuse among secondary school students in Kenya found a male: female ratio of 2:1. They found that 16.1% of students smoked tobacco, 10.3% drank alcohol more than three times a week, 13.5% had smoked cannabis and 16.8% had used other mind-altering drugs not-specified in order to feel high.

The problem was found to be more serious in peri-urban than urban schools and least in rural schools.

In the same year, Owino G¹⁴ presented a paper in Nairobi entitled 'A Report on problems of drug abuse among Kenyan students in Secondary Schools and Teacher Training Colleges.' Up to 30% of the students were found to regularly take alcohol at least three times a week. 20.6% smoked tobacco, but only 2% reported ever trying cannabis. 1.9% occasionally chewed khat and 42.1% of the students had not used any of the indicated drugs.

It was noted that the prevalence of alcohol abuse was three times higher in this study than in the study conducted by Dhadphale.

According to Owino the main reasons why students take drugs were found to be the influence of friends, easy availability of drugs, and bad parentage in that order and in the opinion of their teachers.

In a household survey of youth in Nairobi between age 19 and 29 years including their parents or guardians (Yambo M and Acuda SW¹⁵ 1983), the main drugs of abuse were found to be tobacco at 30% alcohol at 11.2%, khat (3.6%), cannabis (3.6%) and cocaine (0.4%). Amphetamines were rated at 1.6%, inhalants at 1.6% and tranquilizers and sedatives at 2.0%. The greatest number of abusers of tobacco, alcohol and cannabis were in the 25-29 year age group while the use of khat was more prevalent in the 10-14 year age group.

Dhadphale 1985¹⁶ found that 12% of patients attending primary health clinics had alcohol dependence syndrome whereas Ndeti D M¹⁷ had found higher levels of 31% in the general hospital setting in 1983.

The Mathai AM (1989)⁹ study, was a student survey on substance use at the university of Nairobi. This study found a regular alcohol users rate of 43% with overt alcohol abusers rated at 17%.

Tobacco use was rated at 14-43% among the female students, opium 6%, heroin 0.9%, and other opiates at 0.9%.

Kuria MW¹⁰ 1996 in a comparative study of drug abuse among rural and urban secondary schools found drug abuse to be most prevalent between 16 and 20 years of age in both rural and urban schools. More males were found to use/abuse drugs than females.

56% of urban students compared with 49% of their rural counter parts had an experience with alcohol use.

This was followed by tobacco, which was used by 37% of urban as compared to 32% of rural students. Inhalants were third and were used more by the rural students (27%) compared to urban students (21%). Cannabis was used by 14.99% of urban students as compared to 12.8% of rural students. However, cocaine and opiates were abused more by rural students.

Alcohol, tobacco and inhalants were the most abused drugs in both urban and rural schools in that order.

Ndetei , Kathuku and Othieno 1997 in a study on the economic – social – political aspects of illicit drug use in Kenya , found a wide range of drugs of abuse including narcotics, none of which was being used intravenously at that time. They established that most substances were abused in combination with others and that the most vulnerable group was in the 16-20 year age range (Ndetei at al., 1997) ¹⁷

Ndetei D M 2004 ⁴⁰ in an attempt to shift from merely addressing epidemiological trends to also addressing the medico–psychological and socio–political–economic links, included in the research various stakeholders, and used both primary and secondary data with a view to finding intervention entry points. The research employed a Rapid Situational Analysis (RSA) design. Alcohol and tobacco use were excluded as the study was only concerned with illicit drug use. The study findings reported that the age of first drug use was in the range of 0 - 9 years, starting with volatile hydrocarbons. In the 10 -15 year age group, the incidence of drug use was increased with volatile hydrocarbons still being used as the drug of choice apart from cannabis (40% and 31%).

Use of cocaine (11 – 4%), mandrax, amphetamines and heroin was also noted to begin at this age. Those who initiated drug use at 16-20 years chose cannabis, mandrax and amphetamines. None of the previous studies reported intravenous drug use in schools, although in 1997, Ndetei et al recommended that it should be the subject of study. The authors noted the following as important factors associated with drug abuse and suggested possible intervention entry points;

- (i) Biological factors – a biological basis for dependence;
- (ii) Psychological factors and
- (iii) Social / environmental factors.

The NACADA 2004 ³⁹ reported the findings of a national survey on drug use (data collected in 2001 / 2002), including tobacco and alcohol use. In the survey, the youth (10-24 years) were grouped into those who were attending school and those who were not. The study reported data on lifetime and current (within the last 30 days) use of only five drugs – alcohol, tobacco, bhang (cannabis), miraa (khat) and inhalants – for each of the eight provinces in Kenya. However, without information on the numbers studied, it is not possible to evaluate whether or not the variations between the provinces were significant or, if they were trends or simply artifacts.

A study of five cohorts of drug abusers in Kenya by Ndetei et al (not yet published) found the peak age of substance abuse to be 21 to 30 years with most abusers being male. Leisure, stress and peer pressure were the most common reasons given for abusing substances. A wide range of criminal behaviour was recorded in substance abusers and risky sexual behaviour was one consequence of abusing substances.

Caleb J Othieno et al (not yet published) studied the relationship between substance abuse, nicotine use and positive and negative symptoms in schizophrenic patients at Mathari Hospital, Nairobi, Kenya. The study found the most commonly abused substances to be tobacco, alcohol and cannabis. Higher rates of substance abuse were reported in males than females. Abuse of other substances showed similar trends but at a lower level. The lifetime prevalence rates for tobacco use and dependence were 37.1 % and 28.6% respectively. No correlation was found between SAPS and SANS scores and substance abuse.

A case study of Alcohol / Substance abuse and Psychiatric comorbidities was done on patients at Mathari Psychiatric Hospital by Ndetei DM et al., (not yet published). Only 42 out of the total 691 patients studied had a first working diagnosis of substance abuse but nearly 35% of the patients scored for a Diagnostic and Statistical Manual of Mental Disorders (4th edition) diagnosis of alcohol dependence / abuse. There was a high comorbidity of alcohol abuse / dependence with opiate, sedative and khat use, as well as with mood and other psychotic disorders. Substance abuse disorders correlated significantly with other psychiatric disorders. Only 12 patients were in a drug rehabilitation unit, all of whom had a dual psychiatric diagnosis of affective disorder. There were high comorbidity rates of substance abuse in both general psychiatric wards and drug rehabilitation units.

3.2 THE REST OF AFRICA

A W.H.O. workshop in 1985¹⁸ found that in Egypt, the age of onset of drug abuse is approximately 16 years for tobacco, prescribed drugs and alcohol, and 18 years for cannabis and

opium. The most abused drug among students is alcohol, followed by prescription drugs and narcotics.

In Mauritius, the same workshop identified the vulnerable age groups as 14 – 20 years.¹⁸

A school survey done in Nigeria showed that alcohol was the most abused drug by the youth. The age at first contact was 11 yrs, with children as young as 11 years having started using cannabis¹⁸

In Liberia, a study done showed that 14% of students aged between 5 and 12 years had used cannabis once in the past and up to 50% of these were continuous users. Apart from cannabis, large quantities of amphetamines were imported in the 1970s. These could be purchased over the counter without prescription. Students started using them as an aid to studying but this was banned in 1977¹⁸

In a study done in Lusaka, Zambia, 32% of boys and 10% of girls had tried cannabis. Regular smoking of cannabis was mainly a prerogative of boys but there was a slight increase among girls over the years.¹⁸

3.3 THE INTERNATIONAL PERSPECTIVE

The U.S. faces problematic rates of illicit drug, alcohol and tobacco use among the youth. In 1999, 55% of high school seniors reported having used an illegal drug at least once, as did 46 % of tenth and 28 % of eighth graders.¹⁹ Among adolescents ages 12 to 17, the average ages of first use of marijuana, cocaine and heroin were 14, 15 and 14 years respectively.²⁰

In 1997, more than 31 % of 12th graders, 25 % of 10th graders, and 14% of 8th graders claimed to have consumed five or more alcoholic drinks in the preceding two weeks.²⁴

Perhaps most disturbing, among 12- to 17-year olds who exhibited no other problem behaviours, those who had used marijuana, alcohol or cigarettes in the previous month were 17 times more

likely to later consume drugs such as cocaine, heroin or LSD than those who had not used marijuana , alcohol or cigarettes. ²⁵

Research done in 1991–1992 showed that drug use among Hispanic youth remained alarmingly high. Dr. Jorge Delva et al (2005) ²⁶ from the Institute for Social Research at Ann Arbor, Michigan, compared trends of marijuana, cocaine, and heavy alcohol use among adolescents within the largest subgroups of the Hispanic population in the U.S. (Mexican–American, Puerto–Rican, Cuban and other Latin American Heritage).

The research team examined data from 24,235 self–identifying Hispanic students in eighth grade from the 1991–1992 monitoring the future (MTF) surveys.

Although drug use trends for Hispanics were consistent among eighth–graders, it varied by subgroups and drug type, and was 25 to 33 % higher for boys than girls, except in the Cuban group. There were no gender differences among these groups in past year cocaine use and heavy drinking.

Hispanic students living in households with both parents were less likely to use cocaine than Hispanic students living with no parents.

Mexican–America, Puerto Rican and Cuban–American students in no-parent households were more likely to initiate heavy drinking than the other Latin American group, comprised mostly of youth with Central and South American heritage.

A randomized, controlled study done in 55 South Dakota middle schools from 1997 to 1999 by Phyllis Ellickson et al²⁷ was called PROJECT ALERT and involved 4,000 seventh grade students.

They were assigned to PROJECT ALERT classes or to a control group that was exposed to drug prevention measures already in place at their schools. The analysis assessed drug use 18 months later.

Results showed that PROJECT ALERT lessons significantly reduced the proportion of new marijuana users by 24 %.

When compared with the control group, marijuana initiation rates were 38 % lower for ALERT Students who had not tried cigarettes or marijuana at the start of the study, and 26 % lower for higher risk students who had tried cigarettes.

Scores reflecting overall alcohol abuse were 24 % lower for all ALERT students.

Thus drug prevention programs are critical to school-based anti-drug efforts and they can effect behaviour change in nonusers and in youth who already smoke and drink.

In Israel, adolescents aged 12 -18 years were studied using a self report questionnaire (Zipora Barnea²⁸ et al 1989). A sample of high school students, a sample of detached youth and a sample of inmates in institutions for juvenile delinquents was used.

Alcohol consumption was assessed by frequency of use during the last year, use during the last month and use during the last week.

Prevalence of drinking during the last year was 58%, 42% during the last month and 25% during the last week. The results indicated that alcohol consumption is concentrated among groups of deviant adolescents at rates exceeding those found among high school students.

Recent research has also shown that women and men differ in substance abuse etiology, disease progression, and access to treatment for substance abuse.

A review article on the effectiveness of substance abuse treatment programming for women (Olivia Silber Ashley et al ²⁹) provides an overview of what is known about the components of successful treatment-programs for women. Thirty-eight studies of the effect on treatment outcomes of substance abuse treatment programming for women were reviewed. The studies showed positive associations between child care, prenatal care, women-only programs, supplemental services and workshops that address women-focused topics, mental health programming and comprehensive programming, treatment completion, length of stay and decreased use of substances, reduced mental health symptoms, improved birth outcomes, employment, self-reported health status and HIV risk reduction.

3.4 SUBSTANCE ABUSE IN FORENSIC POPULATIONS

The Epidemiological Catchment Area (ECA) Surveys by Regier et al 1990 ³⁰ had shown that having a mental disorder doubles the risk of an alcohol abuse disorder and the risk increases by four times for drug-related disorders. The institutional ECA surveys of psychiatric patients and

prisoners show even higher levels of comorbidity, with a lifetime prevalence of substance abuse disorders of 16.7% in the general population and 39% in patients of mental hospitals.

The use of alcohol and drugs is an increasingly important issue in the management of in-patients, even in secure units. Many patients in medium secure units have leave and can therefore bring drugs into the unit. Visitors to secure units are another source of illegal drugs and alcohol.

There are certain indicators that point to a diagnosis of substance abuse in inpatients with psychosis, as described by Poole and Brabbins 1997³¹. The individual may have sudden unexplained exacerbations of psychosis, evidence of financial embarrassment, intoxication, deterioration of behaviour and violence, and be a victim of assault and/or bullying.

The patients in general may display violence and bullying between themselves and there may be a change in the mental state and behaviour of a number of patients.

Diagnostic indicators in the ward regime include problems following visits to the ward of specific visitors and problems after specific patients return from leave.

Among the studies done in forensic patients is the Thomas Embling Hospital study in Victoria, Australia where forensic psychiatric patients were assessed to determine the prevalence of substance abuse disorders and mental illness within this population(Ogloff TR et al³²), approximately 74% were found to have a lifetime substance abuse or dependence disorder. Results suggested more extensive criminal histories and higher levels of risk and needs in patients with major mental illness and substance abuse than in those with major mental illness alone.

In a similar study in Amsterdam, Netherlands (Irma G. H. Timmerman and Paul M.G. Emmelkamp 2001)³³ the prevalence of a broad range of Diagnostic and Statistical Manual of Mental Disorders, third edition, revised (DSM-III-R) Axis I disorders (Composite International Disorder Interview) and all Axis II disorders (International Personality Disorder Examination) were determined with standardized, semi-structured interviews of a group of 39 forensic male patients.

Substance abuse (75.7%), mood (51.3%) and anxiety (40.3%) disorders were the most prevalent Axis I disorders. Of Axis II disorders, 86.8 % evinced a personality disorder most often from the B Cluster.

Sarah Isherwood and Deborah Brooke 2001³³ in their study 'Prevalence and Severity of Substance misuse among referrals to a local forensic service' described self-reported levels of substance misuse to establish degrees of dependency and comorbidity with other diagnostic categories. 146 (70%) of 209 consecutive referrals completed a semi-structured questionnaire, including the Alcohol Use Disorder's Identification Test (AUDIT), Severity of Alcohol Dependency Questionnaire (SADQ), Alcohol Problem Questionnaire (APQ) and, for frequent users of opiates and stimulants, the Severity of Dependence Scales (SDS).

ICD -10 diagnoses of substance abuse were found in 83 (57%) of the subjects. A combination of mental illness and a substance misuse diagnosis was found in 54 (37%). The subgroup accepted into forensic psychiatry services was found to have higher levels of comorbidity, although levels of dependency were low.

A Census of Forensic Mental Health Services in New Zealand done in October 2005³⁴ came up with the following: the length of current admission was less than one year in 43% of forensic patients and 31% in community-based forensic service users; 10% inpatients and 16% community forensic service users had long-term admissions of six years or more ; Schizophrenia was the most common diagnosis among inpatients (71%) and community forensic service users (73%) ; violence or the threat of violence was the index offence for 69% of forensic inpatients and 52% of community forensic service users .The next most frequent category was sexual offences and then offences against a person.

3.5 RELATIONSHIP OF SUBSTANCE ABUSE TO VIOLENCE AND CRIME

Drugs and alcohol can produce effects that may lead to violence as part of an acute psychological disturbance or as a result of misuse, withdrawal and dependence.

In general, alcohol is a major risk for violent offending and illicit drug use is more likely to be associated with acquisitive offending and trafficking. Athanasiadis (1999)³⁵ reviewed the

association between drugs, alcohol and violence. Not all drugs are associated with violence in populations without psychosis. Substances that have a positive association to violence include cocaine and 'crack', amphetamines, anabolic androgen steroids, alcohol, benzodiazepines, and cannabis.

Those with no association are nicotine and sole use of opiates.

The aetiology of violence is complex and alcohol-induced aggression is not a uniform phenomenon. Three possible mechanisms have been proposed by Pihl and Lemarquand 1998³⁶ to explain the association of alcohol and violence – potentiation, inhibition and disorganization of behaviour. These might be mediated through serotonin pathways.

Badawy 1998³⁷ suggests that in those with a susceptibility to aggression after alcohol consumption there is a marked depletion of brain serotonin, which may increase the likelihood of aggression in response to internal or external stimuli. It has also been proposed that the disruption of the executive cognitive functioning by alcohol leads to alcohol-intoxicated aggression.

These mechanisms however are poorly understood.

The "typical" forensic case can be described as a violent offender with a personality disorder that predated the development of a mental illness, complicated further by harmful substance abuse (Marshall 1998).³⁸

Factors to consider in the risk assessment for dual diagnosis violent offenders include firstly the index offence – nature and severity, past offending history; secondly the substance abuse – alcohol history, drug history, nature and extent of harmful use/dependence, motivation for change, early identification of relapse of abuse; thirdly the mental illness – nature of the illness, treatment compliance, insight, early identification of relapse of illness; and fourthly the relationship of violence to – use, abuse, withdrawal or chronic use of alcohol/drugs and mental illness and alcohol/drug abuse.

Substance abuse as a topic must now be viewed as central to the discipline of forensic psychiatry. The splitting of services for the offender patient with mental disorder (particularly those with psychotic illness) and associated substance abuse problems and the separation of

training schemes for doctors and other disciplines should be reviewed if we are to provide the best services for our patients.

CHAPTER 4: RESEARCH SCOPE

4.1 AIM:

To determine the magnitude of substance abuse among forensic psychiatry inpatients at the MSU, Mathari Hospital, Nairobi, Kenya.

4.2 SPECIFIC OBJECTIVES:

1. To determine the prevalence of substance abuse among forensic psychiatry inpatients at the MSU, Mathari Hospital, Nairobi, Kenya.
2. To determine the correlation between substance abuse and sociodemographic characteristics of this group of patients .
3. To determine the relationship between substance abuse and nature of index offence of these forensic inpatients.
4. To determine their psychiatric comorbidity.
5. To make recommendations to the Mathari Hospital Administration and the Ministry of Health for appropriate management interventions for this group of patients.

4.3 NULL HYPOTHESIS

There is a low prevalence of substance abuse and comorbidity among forensic psychiatry inpatients at the MSU, Mathari Hospital, Nairobi.

4.4 ALTERNATIVE HYPOTHESIS:

There is a high prevalence of substance abuse and comorbidity among forensic psychiatry inpatients at the MSU, Mathari Hospital, Nairobi.

CHAPTER 5: METHODOLOGY

5.1 STUDY DESIGN

The study design was a cross-sectional population study.

5.2. STUDY AREA

The study was carried out at Mathari Hospital, Nairobi.

This is situated approximately 4 kilometers north of Nairobi city, off Thika Road. It was constructed in 1910 during the colonial period as a smallpox isolation centre and then converted into a “lunatic asylum” admitting its first psychiatric patient in 1914. It has since grown and has two main sections, namely the forensic section with 351 beds and the civil section with 332 beds.

At Easter, 1968, Psychiatry in Kenya exploded into public awareness when 14 dangerous mentally ill criminals escaped from Mathari Hospital. The government decided to build a new maximum security psychiatric unit. The construction was completed in 1972, and the unit commissioned in 1979 (Muya, 1990).

The Maximum Security Unit, where this study was carried out is further divided into three sections; Section A, B and C. Sections A and B admit male forensic patients whereas Section C caters for the female patients. There is an infirmary ward within the MSU, which caters for psychiatric patients with comorbid medical/physical conditions.

The civil section of the hospital has several categories including the general male and female wards, amenity wards and a drug rehabilitation ward.

5.3 STUDY POPULATION

The study population consisted of forensic psychiatry inpatients at the MSU, Mathari Hospital who fulfilled the inclusion criteria.

5.4 INCLUSION CRITERIA

1. Forensic inpatients at MSU.
2. Those \geq 18yrs of age.
3. Those who gave consent to participate in the study.

5.5 EXCLUSION CRITERIA

1. Those < 18yrs of age.
2. Those who declined to give consent.
3. The severely debilitated.

5.6. SAMPLE SIZE

As this was a population study, the total population of Sections A, B and C, of the Maximum Security Unit was used. This population was 135 patients.

5.7 SAMPLING METHOD

All populations of Section A, B and C at the MSU were used.

5.8 STUDY INSTRUMENTS

1. SOCIO-DEMOGRAPHIC DATA QUESTIONNAIRE

This researcher-developed questionnaire captures identification data and relevant demographic variables like age, sex, religion, marital status, occupation and the respondent's highest level of occupation.

2. Structured CLINICAL INTERVIEW for THE DIAGNOSTIC and STATISTICAL INTERVIEW – I (SCID) screening module

The SCID, which was developed to make DSM–IV diagnoses, was used.

It is for use in research by trained clinicians.

The SCID incorporates the use of obligatory questions, operational criteria from the DSM-IV, a categorical system for rating symptoms, and an algorithm for arriving at a final diagnosis. The SCID allows the research clinician to tailor a diagnostic assessment to fit the needs of a particular research protocol or a particular patient. In addition, the SCID instructions encourage the diagnostic interview to use all sources of information in rating the presence or absence of symptom or sign of psychopathology. Thus, the SCID is a good choice as a diagnostic instrument for use in research because it contains elements that increase reliability⁴¹. Many studies have been carried out to assess the reliability and validity of this instrument and can be found at <http://cunc.Colombia.edu/dept/SCID>.

Reliability assessments quoted to have yielded varying kappas range from -0.03 (any somatoform disorder) to 1.0 (PTSD, Alcohol Dependence and any other substance abuse).

Most studies, however, rate it highly reliable with kappas above 0.70 for most of the studied disorders^{42, 43}.

Validity assessments have been difficult due to a lack of proper 'gold standard' for diagnosis of psychiatric disorders.

3. ALCOHOL, SMOKING AND SUBSTANCE INVOLVEMENT SCREENING TEST (ASSIST).

WHAT IS THE ASSIST?

The ASSIST is the Alcohol, Smoking and Substance Involvement Screening Test. It is a brief screening questionnaire to find out about people's use of psychoactive substances. It was developed by the World Health Organization (WHO) and an international team of substance use researchers as a simple method of screening for hazardous, harmful and dependent use of alcohol, tobacco and other psychoactive substances. The questionnaire covers:

- tobacco,
- alcohol,

- cannabis,
- cocaine,
- amphetamine type stimulants,
- sedatives,
- hallucinogens,
- inhalants,
- opioids, and
- other drugs.

The ASSIST is especially designed for use by health care workers in a range of health care settings. It may also be useful for professionals who work with people with high risk problems related to substance use.

According to the World Health Organization, primary health care is the first level of contact that individuals, the family and community have with their national health system and constitutes the first part of a continuing health care process. Primary health care relies on a range of different health workers, including physicians, nurses, midwives, social workers, psychologists, certain therapists, auxiliaries and community workers, as well as traditional practitioners, all who have been suitably trained socially and technically to work as a health team and to respond to the expressed health needs of the community.

The ASSIST provides information about:

- the substances people have ever used in their lifetime;
- the substances they have used in the past three months;
- problems related to substance use;
- risk of current or future harm;
- dependence;
- injecting drug use.

The ASSIST can help warn people that they may be at risk of developing problems related to their substance use in the future and it can provide an opportunity to start a discussion with a client about their substance use. It can identify substance use as a contributing factor to the presenting illness. The ASSIST can be linked to a brief intervention to help high-risk substance users to cut down or stop their drug use and so avoid the harmful consequences of their substance use.

5.9 DATA ANALYSIS AND PRESENTATION

Descriptive and inferential analysis was done using the Statistical Package for Social Sciences (SPSS) Version 11.5 .The results were presented in narratives and tables.

5.10 STUDY IMPLEMENTATION

The researcher interviewed the forensic inpatients at the MSU from Monday to Friday over a period of 6 weeks.

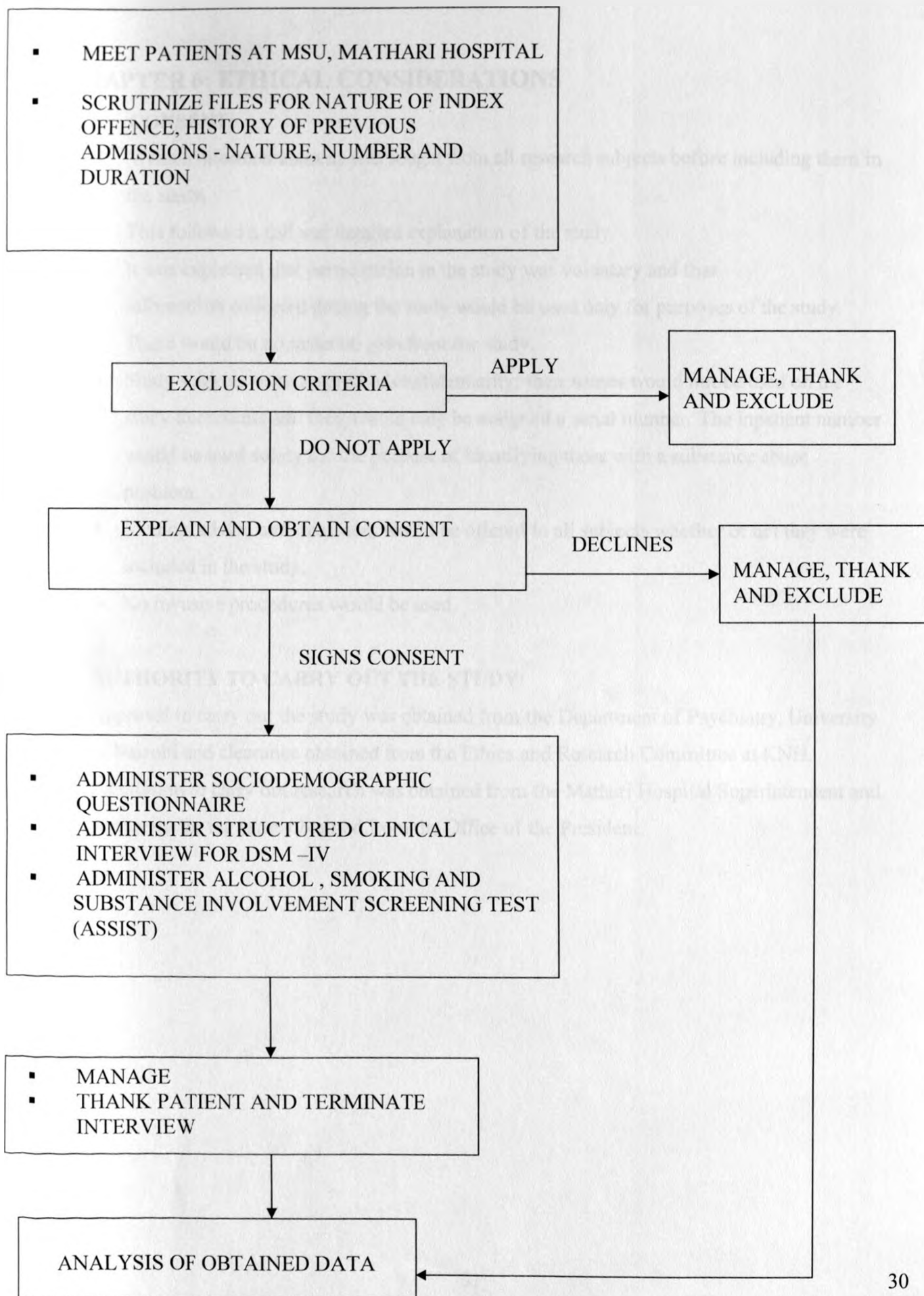
Five interviews were conducted per day.

Consecutive patients meeting the inclusion criteria were selected and consent requested.

5.11 TIME SCHEDULE

- | | |
|-------------------------|--------------------|
| a. Proposal Development | March – May 2007 |
| b. Approval | June 2007 |
| c. Data collection | Dec 2007 –Feb 2008 |
| d. Data analysis | Mar – April 2008 |
| e. Report writing | May 2008 |
| f. Presentation | June 2008 |

5.12 FLOW CHART ILLUSTRATING METHODOLOGY



CHAPTER 6: ETHICAL CONSIDERATIONS

CONSENT:

1. Written informed consent was sought from all research subjects before including them in the study.
This followed a full and detailed explanation of the study.
2. It was explained that participation in the study was voluntary and that information collected during the study would be used only for purposes of the study. There would be no material gain from the study.
3. Study subjects were assured of confidentiality; their names would not be used on the study documents and they would only be assigned a serial number. The inpatient number would be used solely for the purpose of identifying those with a substance abuse problem.
4. Medical advice and treatment would be offered to all subjects whether or not they were included in the study.
5. No invasive procedures would be used.

AUTHORITY TO CARRY OUT THE STUDY:

Approval to carry out the study was obtained from the Department of Psychiatry, University of Nairobi and clearance obtained from the Ethics and Research Committee at KNH.

Permission to carry out research was obtained from the Mathari Hospital Superintendent and Authority for the same obtained from the Office of the President.

CHAPTER 7: BUDGET (Kenya Shillings)

1. Stationery, printing and photocopy services	20,000
2. Internet access / computer services	10,000
3. Transport	20,000
4. Telephone services	5,000
5. Data analysis	30,000
6. Miscellaneous	10,000
Total Expenses	95,000

Funding was sourced from personal savings.

The study also cost the researcher in terms of time spent. This was unquantifiable.

CHAPTER 8: RESULTS

II SOCIODEMOGRAPHIC PROFILE

A total (N) of 135 forensic inpatients satisfied the inclusion criteria and were recruited into the study and interviewed.

TABLE 1 : AGE

	n	%	Male: n (%)	Female: n (%)
18-40	92	68.1	82 (60.7%)	10 (7.4%)
41-63	33	24.4	27 (20.0%)	6 (4.4%)
64-86	10	7.4	9 (6.7%)	1 (0.7%)
Total	135	100.0	118 (87.4%)	17 (12.6%)

Mean = 37.16

Majority of the subjects (68.1%) were in the 18-40 yr age bracket followed by 41-63 yrs (24.4%) and 64-86 yrs (7.4%).

One hundred and eighteen (87.4%) were male and 12.6% (n=17) were female.

In the 18-40 year age group 60.7% of the total were male and 7.4% female whereas 20.0% of the 41-63 year age group were male and 4.4% female. The 64-86 year age group had 6.7% male and 0.7% female.

TABLE 2 : RESIDENCE BEFORE ARREST (PROVINCE)

	n	%
Central	34	25.2
Coast	7	5.2
Eastern	40	29.6
Nairobi	4	3.0
North Eastern	14	10.4
Nyanza	10	7.4
Rift Valley	18	13.3
Western	8	5.9
Total	135	100.0

The highest percentage came from Eastern province (29.6%), followed by Central province (25.2%), whereas the lowest percentage were from Nairobi province (3.0%). Rift Valley province accounted for 13.3%, Northeastern 10.4%, Western 5.9% and Coast province 5.2%.

TABLE 3 : RELIGION

	n	%
Catholic	56	41.5
Protestant	61	45.2
Muslim	15	11.1
Other (specify)	3	2.2
Total	135	100.0

Sixty-one (45.2%) of the participants were Protestant, 41.5% (n=56) were Catholic and 11.1% (n=15) were Muslim.

TABLE 4 : HIGHEST LEVEL OF EDUCATION

	n	%
No formal education	22	16.3
Primary	74	54.8
Secondary	33	24.4
Tertiary (college/University)	6	4.4
Total	135	100.0

Majority of the participants numbering 74 (54.8%) had attained primary level as their highest level of education, whereas 24.4% (n=33) had reached secondary, 22 16.3% (n=22) had no formal education and 4.4% (n=6) had tertiary level of education.

TABLE 5 : MARITAL STATUS

	n	%
Single	69	51.1
Married	39	29.6
Separated	21	15.6
Divorced	2	1.5
Widowed	3	2.2
Total	135	100.0

More than half the total number of study subjects 51.1% (n=69) were single, 29.6% (n=40) were married, 15.6% (n=21) were separated, 2.2% (n=3) were widowed and 1.5% (n=2) divorced.

TABLE 6 : OCCUPATION

	n	%
Student	4	3.0
Formal employment	23	17.0
Informal employment	37	27.4
Businessperson	11	8.1
Unemployed	60	44.4
Total	135	100.0

Sixty participants (44.4%) were unemployed. Those in informal employment, e.g. hawkers and casual labourers were 27.4% (n=37), those in formal employment 17.0% (n=23), businesspersons 8.1% (n=11) and students 3.0% (n=4).

TABLE 7 : FAMILY HISTORY OF MENTAL ILLNESS

	n	%
Yes	35	26.5
No	97	73.5
Total	132	100.0

Thirty-five participants (26.5%) admitted having a family history of mental illness and 73.5% (n=97) denied the same.

TABLE 8 : NATURE OF INDEX OFFENCE (AS PER FILE)

	n	%
Violent offences	92	68.1
Sexual offences	11	8.1
Theft and handling of stolen goods	7	5.2
Criminal damage(minor property damage to arson)	25	18.5
Total	135	100.0

Violent offences were the majority committed by 68.1% (n=92) of all the participants. These included murder, manslaughter and robbery with violence. Twenty-five (18.5%) had committed criminal damage ranging from minor property damage to arson, 8.1% (n=11) had committed sexual offences and 5.2% (n=7) had committed theft and handling of stolen goods.

TABLE 9 : HISTORY OF PREVIOUS ADMISSION

	n	%
Yes	67	51.1
No	64	48.9
Total	131	100.0

Sixty-seven (51.1%) had a history of previous admission whereas 48.9% (n=64) denied the same. 4 participants did not respond.

TABLE 10 : NUMBER OF PREVIOUS ADMISSIONS

	n	%
1	36	52.9
2	16	23.5
More than two	16	23.5
Total	68	100.0

Of those who had a history of previous admission 52.9% (n=36) had 1 previous admission, 23.5% (n=16) had 2 previous admissions and 23.5% (n=16) had more than two previous admissions.

TABLE 11 : DURATION OF PREVIOUS ADMISSION

	n	%
Days	5	7.4
Months	53	77.9
Years	10	14.7
Total	68	100.0

Majority of those with previous admissions had been admitted for months, i.e. 77.9% (n=53). Ten (14.7%) had been admitted for years and 7.4% (n=5) for days.

TABLE 12 : NATURE OF PREVIOUS ADMISSION

	n	%
Civil	39	56.5
Criminal	30	43.5
Total	69	100.0

Nature of previous admission(s) was civil in 56.5% (n=39) and criminal in 43.5% (n=30).

III ASSIST

TABLE 13 : FREQUENCY OF SUBSTANCES EVER USED

		NO	Yes	Total
Tobacco Products	n (%)	56 (41.5%)	79 (58.5%)	135 (100.0%)
Alcoholic beverages	n (%)	70 (51.9%)	65 (48.1%)	135 (100.0%)
Caffeine	n (%)	131 (97.0%)	4 (3.0%)	135 (100.0%)
Cannabis	n (%)	92 (68.1%)	43 (31.9%)	135 (100.0%)
Cocaine	n (%)	132 (97.8%)	3 (2.2%)	135 (100.0%)
amphetamine type stimulants	n (%)	104 (77.0%)	31 (23.0%)	135 (100.0%)
inhalants	n (%)	131 (97.8%)	3 (2.2%)	134 (100.0%)
sedatives or sleeping pills	n (%)	131 (97.0%)	4 (3.0%)	135 (100.0%)
hallucinogens	n (%)	135 (100.0%)		135 (100.0%)
opioids	n (%)	135 (100.0%)		135 (100.0%)

Tobacco products were the most frequently used substance by 58.5% (n=79) of the participants. This was followed by alcoholic beverages by 48.1% (n=64), cannabis by 31.9% (n=43), amphetamine type stimulants, e.g. miraa by 23.0% (n=31), caffeine and sedatives / sleeping pills by 3% (n=4) each and cocaine and inhalants by 2.2% (n=3) each. There was no use of hallucinogens or opioids reported.

TABLE 14 : ASSIST

	n	%
Advice	34	25.2
Detoxification	89	65.9
Detoxification & Rehabilitation	12	8.9
Total	135	100.0

Thirty-four (25.2%) required advice, 65.9% (n=89) required detoxification and 8.9% (n=12) required detoxification and rehabilitation. 74.8% were therefore abusing substances.

NB.

Alcoholic beverages include beer, wine, spirits, chang'aa and kumi kumi (local brew).

Cannabis includes marijuana, pot, grass, hash and bhong.

Cocaine includes coke and crack.

Amphetamine-type stimulants include speed, diet pills, ecstasy and khat/miraa.

Inhalants include nitrous, glue, petrol, and paint thinner.

Sedatives or sleeping pills include valium, serepax and rohypnol.

Hallucinogens include LSD, acid, mushrooms, PCP and special K.

Opioids include heroin, morphine, codeine and brown sugar.

TABLE 15 : FREQUENCY OF USE OF THE SUBSTANCE IN THE THREE MONTHS PRIOR TO INTERVIEW

		Never	Once or twice	Monthly	Weekly	Daily or almost daily	Total
tobacco products	n (%)	75 (56.4%)	1 (.8%)	0 (.0%)	2 (1.5%)	55 (41.4%)	133 (100.0%)
Alcoholic beverages	n (%)	131 (97.8%)	0 (.0%)	0 (.0%)	0 (.0%)	3 (2.2%)	134 (100.0%)
Caffeine	n (%)	134 (100.0%)	0 (.0%)	0 (.0%)	0 (.0%)	0 (.0%)	134 (100.0%)
Cannabis	n (%)	132 (97.8%)	1 (.7%)	1 (.7%)	0 (.0%)	1 (.7%)	135 (100.0%)
Cocaine	n (%)	133 (100.0%)	0 (.0%)	0 (.0%)	0 (.0%)	0 (.0%)	133 (100.0%)
amphetamine type stimulants	n (%)	131 (97.8%)	1 (.7%)	0 (.0%)	0 (.0%)	2 (1.5%)	134 (100.0%)
Inhalants	n (%)	133 (99.3%)	0 (.0%)	0 (.0%)	0 (.0%)	1 (.7%)	134 (100.0%)
sedatives or sleeping pills	n (%)	134 (100.0%)	0 (.0%)	0 (.0%)	0 (.0%)	0 (.0%)	134 (100.0%)
Hallucinogens	n (%)	134 (100.0%)	0 (.0%)	0 (.0%)	0 (.0%)	0 (.0%)	134 (100.0%)
Opioids	n (%)	134 (100.0%)	0 (.0%)	0 (.0%)	0 (.0%)	0 (.0%)	134 (100.0%)
Other-specify	n (%)	22 (95.7%)	0 (.0%)	0 (.0%)	0 (.0%)	1 (4.3%)	23 (100.0%)

Tobacco products were the most frequently used substance in the three months prior to interview. Fifty-five (41.4%) participants reported daily or almost daily use whereas 56.4% (n=75) reported that they had never used tobacco.

Three participants (2.2%) had used alcoholic beverages daily whereas 1.5% (n=2) had used amphetamine type stimulants daily.

One participant (0.7%) had used cannabis, 1 (0.7%) inhalants and 1 (0.7%) other on a daily or almost daily basis.

There was no use of caffeine, cocaine, sedatives / sleeping pills, hallucinogens or opioids in the past three months.

TABLE 16 : FREQUENCY OF STRONG DESIRE TO USE THE SUBSTANCE IN THE THREE MONTHS PRIOR TO INTERVIEW

		Never	Once or twice	Monthly	Weekly	Daily or almost daily	Total
Tobacco products	n (%)	70 (53.0%)	0 (.0%)	1 (.8%)	3 (2.3%)	58 (43.9%)	132 (100.0%)
Alcoholic beverages	n (%)	124 (93.9%)	1 (.8%)	1 (.8%)	2 (1.5%)	4 (3.0%)	132 (100.0%)
Caffeine	n (%)	129 (97.0%)	2 (1.5%)	1 (.8%)	1 (.8%)	0 (.0%)	133 (100.0%)
Cannabis	n (%)	128 (97.0%)	0 (.0%)	0 (.0%)	2 (1.5%)	2 (1.5%)	132 (100.0%)
Cocaine	n (%)	131 (99.2%)	1 (.8%)	0 (.0%)	0 (.0%)	0 (.0%)	132 (100.0%)
Amphetamine type stimulants	n (%)	126 (95.5%)	0 (.0%)	1 (.8%)	0 (.0%)	5 (3.8%)	132 (100.0%)
Inhalants	n (%)	131 (99.2%)	1 (.8%)	0 (.0%)	0 (.0%)	0 (.0%)	132 (100.0%)
Sedatives or sleeping pills	n (%)	131 (99.2%)	0 (.0%)	0 (.0%)	0 (.0%)	1 (.8%)	132 (100.0%)
Hallucinogens	n (%)	131 (99.2%)	1 (.0%)	0 (.0%)	0 (.0%)	0 (.8%)	132 (100.0%)
Opioids	n (%)	130 (99.2%)	1 (.8%)	0 (.0%)	0 (.0%)	0 (.0%)	131 (100.0%)
Other - specify	n (%)	16 (88.9%)	1 (5.6%)	1 (5.6%)	0 (.0%)	0 (.0%)	18 (100.0%)

Fifty-eight (43.9%) participants had a strong desire to use tobacco products daily or almost daily.

Five (3.8%) had a strong desire to use amphetamine type stimulants, 3.0% (n=4) alcoholic beverages, 1.5% (n=2) cannabis and 0.8% (n=1) sedatives / sleeping pills on a daily or almost daily basis.

Seventy (53%) had never had a strong desire to use tobacco products in the three months prior to the interview whereas 0.8% (n=1) had a strong desire monthly and 2.3% (n=3) had the same weekly.

TABLE 17 : FREQUENCY OF RELATED HEALTH PROBLEMS IN THE THREE MONTHS PRIOR TO INTERVIEW

		Health problems (specify the four leading drugs).										Chi-Square	P-Value
		Never		Once or twice		Monthly		Weekly		Daily or almost daily			
		n	%	n	%	n	%	n	%	n	%		
Tobacco Products	NO	8	11.3	1	1.4	1	1.4	0	.0	1	1.4	2.773	.428
	Yes	49	69.0	8	11.3	2	2.8	0	.0	1	1.4		
	Total	57	80.3	9	12.7	3	4.2	0	.0	2	2.8		
Alcoholic beverages	NO	25	35.2	1	1.4	0	.0	0	.0	0	.0	6.699	.082
	Yes	32	45.1	8	11.3	3	4.2	0	.0	2	2.8		
	Total	57	80.3	9	12.7	3	4.2	0	.0	2	2.8		
Caffeine	NO	56	78.9	8	11.3	3	4.2	0	.0	2	2.8	2.642	.450
	Yes	1	1.4	1	1.4	0	.0	0	.0	0	.0		
	Total	57	80.3	9	12.7	3	4.2	0	.0	2	2.8		
Cannabis	NO	37	52.1	1	1.4	1	1.4	0	.0	0	.0	12.277	.001
	Yes	20	28.2	8	11.3	2	2.8	0	.0	2	2.8		
	Total	57	80.3	9	12.7	3	4.2	0	.0	2	2.8		
Cocaine	NO	55	77.5	8	11.3	3	4.2	0	.0	2	2.8	1.347	.718
	Yes	2	2.8	1	1.4	0	.0	0	.0	0	.0		
	Total	57	80.3	9	12.7	3	4.2	0	.0	2	2.8		
amphetamine type stimulants	NO	33	46.5	7	9.9	2	2.8	0	.0	1	1.4	1.427	.699
	Yes	24	33.8	2	2.8	1	1.4	0	.0	1	1.4		
	Total	57	80.3	9	12.7	3	4.2	0	.0	2	2.8		
inhalants	NO	56	80.0	8	11.4	3	4.3	0	.0	0	.0	48.331	.001
	Yes	0	.0	1	1.4	0	.0	0	.0	2	2.9		
	Total	56	80.0	9	12.9	3	4.3	0	.0	2	2.9		
sedatives or sleeping pills	NO	54	76.1	9	12.7	3	4.2	0	.0	1	1.4	8.136	.043
	Yes	3	4.2	0	.0	0	.0	0	.0	1	1.4		
	Total	57	80.3	9	12.7	3	4.2	0	.0	2	2.8		
hallucinogens	NO	57	80.3	9	12.7	3	4.2	0	.0	2	2.8		
	Yes	0	.0	0	.0	0	.0	0	.0	0	.0		
	Total	57	80.3	9	12.7	3	4.2	0	.0	2	2.8		
opioids	NO	57	80.3	9	12.7	3	4.2	0	.0	2	2.8		
	Yes	0	.0	0	.0	0	.0	0	.0	0	.0		
	Total	57	80.3	9	12.7	3	4.2	0	.0	2	2.8		
other-specify	NO	10	71.4	3	21.4	1	7.1	0	.0	0	.0		
	Yes	0	.0	0	.0	0	.0	0	.0	0	.0		
	Total	10	71.4	3	21.4	1	7.1	0	.0	0	.0		

Related health problems were found most frequently in those who used inhalants (2.9%) followed by those who used alcohol (2.8%) and cannabis (2.8%). Use of tobacco products, amphetamine

type stimulants and sedatives / sleeping pills was associated with a daily or almost daily frequency of related health problems at 1.4%.

Frequency of related health problems was found to be statistically significant in those using cannabis ($p=0.006$), inhalants ($p=0.000$) and sedatives ($p=0.043$).

TABLE 18 : FREQUENCY OF RELATED SOCIAL PROBLEMS IN THE THREE MONTHS PRIOR TO INTERVIEW

		Social problems (specify the four leading drugs).							
		Never	Once or twice	Monthly	Weekly	Daily or almost daily	Total		
		n	n	n	n	n	n	Chi-Square	P -Value
Tobacco Products	NO	7	2	0	0	0	9		
	Yes	45	14	0	0	0	59		
	Total	52	16	0	0	0	68	.010	.921
Alcoholic beverages	NO	22	3	0	0	0	25		
	Yes	30	13	0	0	0	43		
	Total	52	16	0	0	0	68	2.921	.087
Caffeine	NO	51	16	0	0	0	67		
	Yes	1	0	0	0	0	1		
	Total	52	16	0	0	0	68	.312	.576
Cannabis	NO	34	2	0	0	0	36		
	Yes	18	14	0	0	0	32		
	Total	52	16	0	0	0	68	13.735	.000
Cocaine	NO	51	15	0	0	0	66		
	Yes	1	1	0	0	0	2		
	Total	52	16	0	0	0	68	.802	.370
amphetamine type stimulants	NO	30	11	0	0	0	41		
	Yes	22	5	0	0	0	27		
	Total	52	16	0	0	0	68	.625	.429
inhalants	NO	51	16	0	0	0	67		
	Yes	0	0	0	0	0	0		
	Total	51	16	0	0	0	67		
sedatives or sleeping pills	NO	50	15	0	0	0	65		
	Yes	2	1	0	0	0	3		
	Total	52	16	0	0	0	68	.168	.682
hallucinogens	NO	52	16	0	0	0	68		
	Yes	0	0	0	0	0	0		
	Total	52	16	0	0	0	68		
opioids	NO	52	16	0	0	0	68		
	Yes	0	0	0	0	0	0		
	Total	52	16	0	0	0	68		
other-specify	NO	8	6	0	0	0	14		
	Yes	0	0	0	0	0	0		
	Total	8	6	0	0	0	14		

The highest number of those who experienced related social problems in the three months prior to interview was found in those who used cannabis (n=14), tobacco products (n=14) and alcoholic beverages (n=13).

This was followed by amphetamine type stimulants (n=5), cocaine (n=1) and sedatives / sleeping pills (n=1).

The relationship between social problems and use of cannabis was statistically significant (p=0.000).

TABLE 19 : FREQUENCY OF RELATED LEGAL PROBLEMS IN THE THREE MONTHS PRIOR TO INTERVIEW

		Legal Problems (specify the four leading drugs).								
		Never	Once or twice	Monthly	Weekly	Daily or almost daily	Total			
		n	n	n	n	n	n	Chi- Square	P-Value	
Tobacco Products	NO	4	5	0	0	0	9			
	Yes	43	19	2	0	0	64			
	Total	47	24	2	0	0	73	2.521	.283	
Alcoholic beverages	NO	21	4	0	0	0	25			
	Yes	26	20	2	0	0	48			
	Total	47	24	2	0	0	73	6.608	.037	
Caffeine	NO	46	23	2	0	0	71			
	Yes	1	1	0	0	0	2			
	Total	47	24	2	0	0	73	.306	.858	
Cannabis	NO	34	4	0	0	0	38			
	Yes	13	20	2	0	0	35			
	Total	47	24	2	0	0	73	21.963	.000	
Cocaine	NO	47	22	2	0	0	71			
	Yes	0	2	0	0	0	2			
	Total	47	24	2	0	0	73	4.198	.123	
amphetamine type stimulants	NO	27	17	1	0	0	45			
	Yes	20	7	1	0	0	28			
	Total	47	24	2	0	0	73	1.322	.516	
inhalants	NO	46	24	2	0	0	72			
	Yes	0	0	0	0	0	0			
	Total	46	24	2	0	0	72			
sedatives or sleeping pills	NO	46	22	2	0	0	70			
	Yes	1	2	0	0	0	3			
	Total	47	24	2	0	0	73	1.641	.440	
hallucinogens	NO	47	24	2	0	0	73			
	Yes	0	0	0	0	0	0			
	Total	47	24	2	0	0	73			
opioids	NO	47	24	2	0	0	73			
	Yes	0	0	0	0	0	0			
	Total	47	24	2	0	0	73			
other-specify	NO	8	6	0	0	0	14			
	Yes	0	0	0	0	0	0			
	Total	8	6	0	0	0	14			

The highest number of participants who experienced legal problems once or twice in the 3 months prior to interview were those who used cannabis (n=20) and alcoholic beverages (n=20). This was closely followed by those who used tobacco products (n=19). Seven participants using amphetamine type stimulants, 2 using cannabis and 2 using sedatives / sleeping pills had related legal problems once or twice in the previous three months. The association between legal problems and use of alcoholic beverages (p=0.037) and cannabis (p=0.000) were statistically significant.

TABLE 20 : FREQUENCY OF FAILURE TO DO WHAT WAS NORMALLY EXPECTED IN THE THREE MONTHS PRIOR TO INTERVIEW

	n	%
NO, never	61	95.3
Yes, but not in the past 3 months	3	4.7
Total	64	100.0

Three participants (4.7%) had failed to do what was expected of them, but not in the previous three months.

TABLE 21 : FREQUENCY OF EXPRESSED CONCERN BY A RELATIVE OR FRIEND ABOUT USE OF THE SUBSTANCE

	Frequency	Percent
NO, never	21	27.6
Yes, but not in the past 3 months	48	63.2
Yes in the past 3 months	7	9.2
Total	76	100.0

Seven participants (9.2%) had received expressions of concern about their use of a substance by a relative or friend in the three months prior to interview whereas 63.2% (n=48) had received the same expression of concern, but not in the three months prior to interview. Twenty-one (27.6%) had never received such an expression of concern by a relative or friend.

TABLE 22 : FREQUENCY OF ATTEMPT TO CUT DOWN OR STOP USING THE DRUG

	n	%
N0, never	28	37.8
Yes, but not in the past 3 months	37	50.0
Yes in the past 3 months	9	12.2
Total	74	100.0

Nine participants (12.2%) had attempted to cut down or stop using the drug in the three months prior to interview while 50.0% (n=37) had made the same attempt, but not in the three months prior to interview. Twenty-eight (37.8%) had never attempted to stop using the drug.

TABLE 23 : FREQUENCY OF USE OF ANY DRUG BY INJECTION

	n	%
N0, never	14	100.0
Yes, but not in the past 3 months	0	0.0
Total	14	100.0

No participant had used a drug by injection.

TABLE 24 : ASSIST versus INDIVIDUAL SUBSTANCES

		assist									
		Advice		Detoxification		Detoxification & Rehabilitation		Total		Chi-Square	P -Value
		n	%	n	%	n	%	n	%		
Tobacco Products	NO	34	25.2	22	16.3	0	.0	56	41.5	66.772	.000
	Yes	0	.0	67	49.6	12	8.9	79	58.5		
Alcoholic beverages	NO	34	25.2	34	25.2	2	1.5	70	51.9	44.164	.000
	Yes	0	.0	55	40.7	10	7.4	65	48.1		
Caffeine	NO	34	25.2	87	64.4	10	7.4	131	97.0	9.035	.011
	Yes	0	.0	2	1.5	2	1.5	4	3.0		
Cannabis	NO	34	25.2	55	40.7	3	2.2	92	68.1	27.837	.000
	Yes	0	.0	34	25.2	9	6.7	43	31.9		
Cocaine	NO	34	25.2	88	65.2	10	7.4	132	97.8	12.790	.002
	Yes	0	.0	1	.7	2	1.5	3	2.2		
amphetamine type stimulants	NO	34	25.2	66	48.9	4	3.0	104	77.0	23.508	.000
	Yes	0	.0	23	17.0	8	5.9	31	23.0		
inhalants	NO	34	25.4	86	64.2	11	8.2	131	97.8	2.816	.245
	Yes	0	.0	2	1.5	1	.7	3	2.2		
sedatives or sleeping pills	NO	34	25.2	88	65.2	9	6.7	131	97.0	22.354	.000
	Yes	0	.0	1	.7	3	2.2	4	3.0		
hallucinogens	NO	34	25.2	89	65.9	12	8.9	135	100.0		
	Yes	0	.0	0	.0	0	.0	0	.0		
opioids	NO	34	25.2	89	65.9	12	8.9	135	100.0		
	Yes	0	.0	0	.0	0	.0	0	.0		
other-specify	NO	0	.0	13	72.2	5	27.8	18	100.0		
	Yes	0	.0	0	.0	0	.0	0	.0		

Abuse of tobacco products was found to be the highest, i.e. (58.5%) of the study participants;

49.6% (n=67) requiring detoxification and 8.9% (n=12) requiring detoxification and rehabilitation.

This was followed by abuse of alcoholic beverages in 48.1% (n=65). Fifty-five (40.7%) required detoxification and 7.4% (n=10) required detoxification and rehabilitation.

The third most commonly abused substance was cannabis 31.9% (n=43), 25.2% (n=34) requiring detoxification and 6.7% (n=9) requiring detoxification and rehabilitation.

Amphetamine-type stimulant abuse followed in 23.0% (n=31), 17.0% (n=23) requiring detoxification and 5.9% (n=8) requiring detoxification and rehabilitation.

The fifth most commonly abused substances were caffeine and sedatives / sleeping pills in 3.0% (n=4) each.

Two participants (1.5%) abusing caffeine required detoxification and 1.5% (n=2) required detoxification and rehabilitation.

One participant (0.7%) abusing sedatives / sleeping pills required detoxification while 2.2% (n=3) required detoxification and rehabilitation.

Cocaine and inhalants both had abuse rates of 2.2% (n=3) each.

One (0.7%) who was abusing cocaine required detoxification and 1.5% (n=2) required detoxification and rehabilitation. Two (1.5%) who were abusing inhalants required detoxification whereas 0.7% (n=1) required detoxification and rehabilitation.

There was a statistically significant association ($p < 0.05$) between the ASSIST (substance abuse) and the use of tobacco products ($p=0.000$), alcoholic beverages ($p=0.000$), caffeine ($p=0.011$), cannabis ($p=0.000$), cocaine ($p=0.002$), amphetamine type stimulants ($p=0.000$) and sedatives / sleeping pills ($p=0.000$).

There was no statistically significant association between the ASSIST and inhalants ($p=0.245$).

TABLE 25 : SOCIODEMOGRAPHIC VARIABLES versus ASSIST

		assist									
		Advice		Detoxification		Detoxification & Rehabilitation		Total		Chi-square	P-Value
		n	%	n	%	n	%	n	%		
Age	18-40	23	17.0	58	43.0	11	8.1	92	68.1		
	41-63	8	5.9	24	17.8	1	.7	33	24.4		
	64-86	3	2.2	7	5.2	0	.0	10	7.4		
	Total	34	25.2	89	65.9	12	8.9	135	100.0	3.615	.461
Sex	Male	24	17.8	82	60.7	12	8.9	118	87.4		
	Female	10	7.4	7	5.2	0	.0	17	12.6		
	Total	34	25.2	89	65.9	12	8.9	135	100.0	12.274	.002
Residence	Central	6	4.4	24	17.8	4	3.0	34	25.2		
	Coast	1	.7	6	4.4	0	.0	7	5.2		
	Eastern	11	8.1	26	19.3	3	2.2	40	29.6		
	Nairobi	1	.7	2	1.5	1	.7	4	3.0		
	North Eastern	3	2.2	8	5.9	3	2.2	14	10.4		
	Nyanza	3	2.2	7	5.2	0	.0	10	7.4		
	Rift Valley	8	5.9	10	7.4	0	.0	18	13.3		
	Western	1	.7	6	4.4	1	.7	8	5.9		
	Total	34	25.2	89	65.9	12	8.9	135	100.0	13.061	.522
Religion	Catholic	18	13.3	31	23.0	7	5.2	56	41.5		
	Protestant	13	9.6	45	33.3	3	2.2	61	45.2		
	Muslim	2	1.5	11	8.1	2	1.5	15	11.1		
	Other (specify)	1	.7	2	1.5	0	.0	3	2.2		
	Total	34	25.2	89	65.9	12	8.9	135	100.0	6.502	.369
Highest Level of education	No formal education	8	5.9	14	10.4	0	.0	22	16.3		
	Primary	16	11.9	53	39.3	5	3.7	74	54.8		
	Secondary	9	6.7	17	12.6	7	5.2	33	24.4		
	Tertiary (college/ University)	1	.7	5	3.7	0	.0	6	4.4		
	Total	34	25.2	89	65.9	12	8.9	135	100.0	11.897	.064
Marital Status	Single	20	14.8	41	30.4	8	5.9	69	51.1		
	Married	9	6.7	30	22.5	1	.7	40	29.6		
	Separated	3	2.2	15	11.1	3	2.2	21	15.6		
	Divorced	1	.7	1	.7	0	.0	2	1.5		
	Widowed	1	.7	2	1.5	0	.0	3	2.2		
	Total	34	25.2	89	65.9	12	8.9	135	100.0	7.033	.722
Occupation	Student	0	.0	3	2.2	1	.7	4	3.0		

	Formal employment	5	3.7	18	13.3	0	.0	23	17.0		
	Informal employment	9	6.7	23	17.0	5	3.7	37	27.4		
	Business person	2	1.5	5	3.7	4	3.0	11	8.1		
	Unemployed	18	13.3	40	29.6	2	1.5	60	44.4		
	Total	34	25.2	89	65.9	12	8.9	135	100.0	19.333	.036
Family history of mental illness	Yes	8	6.1	19	14.4	6	4.5	33	25.0		
	No	24	18.2	69	52.3	6	4.5	99	73.1		
	Total	32	24.2	88	66.7	12	9.1	132	100.0	6.299	.614
Nature of index offence(as per file)	Violent offences	26	19.3	60	44.4	6	4.4	92	68.2		
	Sexual offences	4	3.0	7	5.2	0	.0	11	8.1		
	Theft and handling of stolen goods	0	.0	5	3.7	1	.7	6	4.4		
	Criminal damage(minor property damage to arson)	4	3.0	17	12.6	5	3.7	26	19.2		
	Total	34	25.2	89	65.9	12	8.9	135	100.0	14.569	.149
History of previous admission	Yes	19	14.5	42	32.1	6	4.6	67	51.1		
	No	13	9.9	45	34.4	6	4.6	64	48.9		
	Total	32	24.4	87	66.4	12	9.2	131	100.0	1.160	.560
Number of previous admission	1	9	13.2	25	36.8	2	2.9	36	52.9		
	2	3	4.4	11	16.2	2	2.9	16	23.5		
	More than two	2	2.9	11	16.2	3	4.4	16	23.5		
	Total	14	20.6	47	69.1	7	10.3	68	100.0	2.848	.584
Duration of previous admission	Days	1	1.5	4	5.9	0	.0	5	7.4		
	Months	9	13.2	37	54.4	7	10.3	53	77.9		
	Years	4	5.9	6	8.8	0	.0	10	14.7		
	Total	14	20.6	47	69.1	7	10.3	68	100.0	4.357	.360
Nature of previous admission	General	0	.0	0	.0	0	.0	0	.0		
	Civil	6	8.7	26	37.7	7	10.1	39	56.5		
	Criminal	9	13.0	21	30.4	0	.0	30	43.5		
	Total	15	21.7	47	68.1	7	10.1	69	100.0	7.078	.029

There was a statistically significant association between substance abuse and sex ($p=0.002$), occupation ($p=0.036$) and nature of previous admission, i.e. civil or criminal ($p=0.029$).

There was no statistically significant association ($p>0.05$) between substance abuse and age, residence, religion, highest level of education, marital status, family history of mental illness, nature of index offence, history of previous admission, number of previous admissions and duration of previous admission.

III RELATIONSHIP BETWEEN SUBSTANCE ABUSE AND NATURE OF INDEX OFFENCE

TABLE 26 : ASSIST versus NATURE OF INDEX OFFENCE (AS PER FILE)

			Nature of index offence(as per file)				Total
			Violent offences	Sexual offences	Theft and handling of stolen goods	Criminal damage(minor property damage to arson)	
assist	Advice	Count	26	4	0	4	34
		% of Total	19.3%	3.0%	.0%	3.0%	25.2%
	Detoxification	Count	60	7	6	16	89
		% of Total	44.4%	5.2%	4.4%	11.9%	65.9%
	Detoxification & Rehabilitation	Count	6	0	1	5	12
		% of Total	4.4%	.0%	.7%	3.7%	8.9%
Total		Count	92	11	7	25	135
		Total	68.1%	8.1%	5.2%	18.5%	100.0%

Chi-Square 9.197
P-Value .163

There was no statistically significant association between substance abuse and the nature of index offence (p=0.163).

TABLE 27 : INDIVIDUAL SUBSTANCES versus NATURE OF INDEX OFFENCE (AS PER FILE)

		Nature of index offence(as per file)									
		Violent offences		Sexual offences		Theft and handling of stolen goods		Criminal damage(minor property damage to arson)		Chi - Square	P-Value
		n	%	n	%	n	%	n	%		
Tobacco Products	NO	38	28.1	8	5.9	0	.0	10	7.4	8.715	.033
	Yes	55	40.7	3	2.2	6	4.4	15	11.1		
	Total	93	68.9	11	8.1	6	4.4	25	18.5		
Alcoholic beverages	NO	47	34.8	8	5.9	2	1.5	13	9.6	2.809	.422
	Yes	46	34.1	3	2.2	4	3.0	12	8.9		
	Total	93	68.9	11	8.1	6	4.4	25	18.5		
Caffeine	NO	90	66.7	10	7.4	6	4.4	25	18.5	2.406	.493
	Yes	3	2.2	1	.7	0	.0	0	.0		
	Total	93	68.9	11	8.1	6	4.4	25	18.5		
Cannabis	NO	66	48.9	8	5.9	3	2.2	15	11.1	2.122	.547
	Yes	27	20.0	3	2.2	3	2.2	10	7.4		
	Total	93	68.9	11	8.1	6	4.4	25	18.5		
Cocaine	NO	90	66.7	11	8.1	6	4.4	25	18.5	1.386	.709
	Yes	3	2.2	0	.0	0	.0	0	.0		
	Total	93	68.9	11	8.1	6	4.4	25	18.5		
amphetamine type stimulants	NO	77	57.0	10	7.4	3	2.2	14	10.4	11.674	.009
	Yes	16	11.9	1	.7	3	2.2	11	8.1		
	Total	93	68.9	11	8.1	6	4.4	25	18.5		
inhalants	NO	89	66.4	11	8.2	6	4.5	25	18.7	1.401	.705
	Yes	3	2.2	0	.0	0	.0	0	.0		
	Total	92	68.7	11	8.2	6	4.5	25	18.7		
sedatives or sleeping pills	NO	90	66.7	11	8.1	5	3.7	25	18.5	5.040	.169
	Yes	3	2.2	0	.0	1	.7	0	.0		
	Total	93	68.9	11	8.1	6	4.4	25	18.5		
hallucinogens	NO	93	68.9	11	8.1	6	4.4	25	18.5		
	Yes	0	.0	0	.0	0	.0	0	.0		
	Total	93	68.9	11	8.1	6	4.4	25	18.5		
opioids	NO	93	68.9	11	8.1	6	4.4	25	18.5		
	Yes	0	.0	0	.0	0	.0	0	.0		
	Total	93	68.9	11	8.1	6	4.4	25	18.5		
other-specify	NO	8	44.4	2	11.1	1	5.6	7	38.9		
	Yes	0	.0	0	.0	0	.0	0	.0		
	Total	8	44.4	2	11.1	1	5.6	7	38.9		

There was a statistically significant association ($p < 0.05$) between nature of index offence and the use of tobacco products ($p = 0.033$) and Amphetamine type stimulants ($p = 0.009$).

There was no statistically significant association ($p > 0.05$) between nature of index offence and the use of alcoholic beverages, caffeine, cannabis, cocaine, inhalants and sedatives.

TABLE 28 : FREQUENCY OF MAJOR DIAGNOSES

		NO	Yes	Total
PAST MAJOR DEPRESSIVE EPISODE n=109	n (%)	82(75.2%)	27 (24.8%)	109 (100.0%)
DYSTHYMIC DISORDER n=111	n (%)	94 (84.7%)	17 (15.3%)	111 (100.0%)
ALCOHOL DEPENDENCE n=134	n (%)	72 (53.7%)	62 (46.3%)	134 (100.0%)
ALCOHOL ABUSE n=130	n (%)	79 (60.8%)	51 (39.2%)	130 (100.0%)
DRUG ABUSE n=67	n (%)	20 (29.9%)	47 (70.1%)	67 (100.0%)
DEPRESSIVE EPISODES n=134	n (%)	72 (53.7%)	62 (46.2%)	134 (100.0%)
RECENT MAJOR DEPRESSIVE EPISODE n=125	n (%)	104 (83.2%)	21 (16.8%)	125 (100.0%)
SCHIZOPHRENIA n=130	n (%)	75 (57.7%)	55 (42.3%)	130 (100.0%)
PAST EPISODES OF MANIA n=119	n (%)	98 (82.4%)	21 (17.6%)	119 (100.0%)

70.1% of participants had a diagnosis of Drug abuse. Alcohol dependence occurred in 46.3% and Depressive episodes in 46.2% (24.8% had past major depressive episodes and 16.8% had recent major depressive episodes).

Schizophrenia occurred in 42.3% whereas Alcohol Abuse was diagnosed in 39.2%.

Past episodes of mania occurred in 17.6% and Dysthymic Disorder was diagnosed in 15.3%.

TABLE 29 : MAJOR DIAGNOSES versus ASSIST

		assist							
		Advice		Detoxification		Detoxification & Rehabilitation		Chi-Square	P-value
		n	%	n	%	n	%		
PAST MAJOR DEPRESSIVE EPISODE	NO	16	14.7	57	52.3	9	8.3		
	Yes	7	6.4	19	17.4	1	.9		
	Total	23	21.1	76	69.7	10	9.2	1.569	.456
DYSTHYMIC DISORDER	NO	19	17.1	64	57.7	11	9.9		
	Yes	5	4.5	12	10.8	0	.0		
	Total	24	21.6	76	68.5	11	9.9	2.566	.277
ALCOHOL DEPENDENCE	No	16	11.9	47	35.1	9	6.7		
	Yes	18	13.4	41	30.6	3	2.2		
	Total	34	25.4	88	65.7	12	9.0	2.796	.247
ALCOHOL ABUSE	No	17	13.1	51	39.2	11	8.5		
	Yes	17	13.1	33	25.4	1	.8		
	Total	34	26.2	84	64.6	12	9.2	6.459	.040
DRUG ABUSE	No	0	.0	20	29.9	0	.0		
	Yes	0	.0	35	52.2	12	17.9		
	Total	0	.0	55	82.1	12	17.9	6.221	.013
DEPRESSIVE EPISODES	No	15	11.2	47	35.1	10	7.5		
	Yes	19	14.2	41	30.6	2	1.4		
	Total	34	25.4	88	65.7	12	9.0	5.991	.200
RECENT MAJOR DEPRESSIVE EPISODE	No	19	15.2	74	59.2	11	8.8		
	Yes	10	8.0	10	8.0	1	.8		
	Total	29	23.2	84	67.2	12	9.6	8.543	.014
SCHIZOPHRENIA	No	21	16.2	51	39.2	3	2.3		
	Yes	12	9.2	34	26.2	9	6.9		
	Total	33	25.4	85	65.4	12	9.2	5.918	.052
PAST EPISODES OF MANIA	NO	22	18.5	66	55.5	10	8.4		
	Yes	8	6.7	12	10.1	1	.8		
	Total	30	25.2	78	65.5	11	9.2	2.508	.285

There was a statistically significant association between substance abuse and Alcohol Abuse ($p=0.040$), Drug abuse ($p=0.013$) and Recent Major Depressive episode ($p=0.014$).

There was no statistically significant association ($p>0.05$) between substance abuse and Past Major depressive episode, Depressive episodes, Dysthymic Disorder, Alcohol Dependence, Schizophrenia and Past episodes of mania.

CHAPTER 9: DISCUSSION

There is an increasing prevalence of substance abuse in the general population and in psychiatric patients. It has been consistently reported as a major risk factor for violence, both alone as well as combined with mental health disorders. Swanson et al, 1990⁴⁴ in their Epidemiological Catchment Area (ECA) data study reported substance abuse as a more significant variable for risk of violence than any major mental disorder.

Fulwiler and colleagues, 1997⁴⁵ studied patients in an assertive community treatment programme and found that substance abuse either alone or in combination with major mental disorders significantly increased the chances of violent behaviour.

The current study involved 135 mentally-ill offenders who were hospitalized in a Maximum Security Unit after having been charged with committing various offences including violent offences, sexual offences, theft and handling of stolen goods and criminal damage e.g. minor property damage and arson.

SOCIODEMOGRAPHIC CHARACTERISTICS

The forensic inpatients tended to be young men with a mean age of 37 years (Table 1). The male:female ratio was 7:1.

More than half (54.5%) were residing in the Central and Eastern provinces before arrest (Table 2). The likely reason for this high representation could be their close proximity to Nairobi where the Mathari Hospital is situated, thus facilitating easy referral.

Most of the study subjects (86.7%) were Christian and 11.1% were Muslim (Table 3), reflecting the national trends of religious affiliation.

Religion has been known to exert a positive role against problematic behaviour among people with mental illness e.g. schizophrenia. Most religions disapprove or forbid toxic substance abuse and dependence. This study however did not show any significant association between substance use and religion.

The forensic inpatients were more likely to have a low level of education (Table 4) and to be unemployed or in the informal employment sector (Table 6). Numerous publications have shown that factors such as unemployment, low education level and low socioeconomic status increase the risk of criminal behaviour (Swanson et al., 1990⁴⁴)

Substance abuse in the current study population was significantly associated ($p < 0.05$) with sex / gender and occupation (Table 25).

As regards marital status (Table 5), more than half the number of participants were single (51.1%), separated (15.6%) or divorced (1.5%). However, there was no statistically significant association between substance abuse and marital status in the current study i.e. the study subjects abused substances whether they were married, single, divorced or widowed.

Most had no family history of mental illness (Table 7), but majority had been hospitalized previously either as civil (56.5%) or criminal (43.5%) patients as shown in Table 12. There was a significant association between substance abuse, and nature of previous admission (Table 25). The finding of recidivism in these subjects is consistent with findings from multiple other studies of elderly prisoners and forensic evaluatees (Kratcoski, 1990; Teller F et al, 1981; Taylor P et al, 1988; Rosner et al, 1991; Rosner et al 1985; Jennison, 1986).⁴⁶⁻⁵¹

PREVALENCE OF SUBSTANCE ABUSE

The study found the prevalence of substance abuse in the forensic inpatients to be 74.8% (Table 14). This was consistent with the study done by Ogloff TR et al, 2004³² at the Thomas Embling Hospital, Victoria, Australia where approximately 74% were found to have a lifetime substance abuse or dependence disorder.

This is a remarkably high prevalence rate when compared with the prevalence of substance abuse in other study populations done in Kenya, e.g. Dhadphale M et al, 1982¹³ found that among secondary school students aged between 12 and 20 years in both rural and urban schools, 10% reported drinking alcohol three or more times a week, 16.3% smoked cigarettes more than three

times a week, and 13.3% smoked cannabis at least once a month. 16.8% reported using unspecified drugs to feel high.

A more recent study by Ndeti DM et al on the Prevalence of Substance abuse among patients in general medical facilities in Kenya (Journal of Substance Abuse in press), revealed an overall alcohol user rate of 25.1%, bordering from harmful use to dependence. Apart from alcohol, other abused substances included tobacco (16.3%), cannabis (3.9%), cocaine (1.2%), amphetamine/khat (3.6%), and sedatives (2.3%).

The clinician's pick rate for substance use in general hospitals was found to be negligible.

The most commonly abused substance among the forensic inpatients in the current study was tobacco products (58.5%) followed by alcoholic beverages (48.1%), cannabis (31.9%) and amphetamine-type stimulants (23.0%) as shown on Table 13. This trend differed from that found in secondary school students (Kuria MW, 1996)¹⁰ and university students (Mathai AM, 1989)⁹ where alcohol was the most frequently used or abused substance. This difference may be accounted for by the inaccessibility of alcoholic beverages within the Maximum Security Unit as opposed to tobacco products which are cheap and quite readily available.

The use of hallucinogens and opioids was not reported among the study subjects which differed from the findings in secondary schools where opium was abused at a rate of 6.18% and heroin 4.14% of the secondary school students (Kuria MW, 1996)¹⁰. The study subjects in the current study may have misreported their use of illicit drugs for fear of victimization.

Cocaine use was significantly associated with health, social and legal problems (Table 17, 18, 19). Its abuse is a serious and socially damaging problem whose different routes of administration leads to development of various health complications.

Alcohol use significantly led to legal problems. One of the criteria used to make a diagnosis of alcohol abuse includes recurrent alcohol-related legal problems e.g. arrest for alcohol-related disorderly conduct, driving under the influence of alcohol. This significant association was therefore not surprising.

The use of inhalants and sedatives was significantly associated with health problems. Sedatives are available by prescription and have many medical uses. They are used in conjunction with

surgery and are prescribed to treat pain, anxiety, panic attacks, insomnia and in some cases, convulsions. People taking sedatives may rapidly develop tolerance. Sedative intoxication depresses the CNS leading to slurred speech, lack of coordination, inattention, impaired memory or “blackouts” and extreme sluggishness, stupor or coma. Physical addiction is the main problem with sedative dependence. Symptoms of sedative withdrawal include increased heart rate, tachypnoea, hyperpyrexia, sweating, tremors, insomnia, anxiety, nausea and restlessness. It may also cause seizures and hallucinations.

Intoxication with inhalants causes euphoria followed by drowsiness, lightheadedness, dizziness, slurred speech, loss of coordination, hallucinations and delusions, and agitation. Prolonged use/abuse leads to depression, hypoxia, weakness and fatigue, loss of sensation, impaired hearing and vision, and damage to the brain, bone marrow, liver and kidneys.

A statistically significant association was found between an abuse problem and the use of tobacco products, alcoholic beverages, caffeine, cannabis, cocaine, amphetamine type stimulants and sedatives.

RELATIONSHIP BETWEEN SUBSTANCE ABUSE AND CRIME

Violent offences were the most frequently committed among the forensic inpatients (Table 8) accounting for 68.1% of all offences. These included murder, manslaughter and robbery with violence.

Monahan J et al, 2005⁵² in the MacArthur Violence Risk Assessment Study done in the USA found that severely mentally ill individuals who were not taking their medications were more dangerous than the general population. He concluded that the concurrent use of substance doubled the risk of violence in the mentally ill. He also found that compared to substance abuse severe mental illness contributes a relatively small percentage to total violence.

A 6-year follow-up of 301 patients discharged between 1972 and 1975 from a California state hospital reported that their arrest rate for “violent crimes” was 10 times the rate for the general population (Sosowsky L, 1980⁵³).

Although the current study found a statistically significant association between the nature of index offence and the use of tobacco products and amphetamine-type stimulants, there was no statistically significant association between substance abuse in general and the nature of index offence. This finding was surprising.

A possible explanation exists for the different finding in this study.

Previous studies looked at the correlation between violent offences (one variable) per se and substance abuse.

In this study the offences that were compared with substance abuse included violent offences, sexual offences, theft and handling of stolen goods and criminal damage (4 variables). The study revealed that the use of substances did not influence the type of offence committed whether violent or sexual, etc.

This difference in the number of variables at hand may have led to a different finding.

Another possible explanation could be that it does not matter what substance is abused, it may still lead to crime.

COMORBIDITY

The current study found that forensic inpatients had comorbid Depressive episodes (46.2%) schizophrenia (42.3%), past episodes of mania (17.6%) and Dysthymic Disorder (15.3%).

There was an overlap in the diagnosis of Substance use disorders which were picked up by the SCID (Table 28) as opposed to the ASSIST e.g. Drug abuse 70.1%, Alcohol dependence 46.3% and Alcohol abuse 39.2%.

The substance abuse rates were however comparable (SCID 70.1% and ASSIST 74.8%).

Recent major depressive episode was significantly associated ($p < 0.05$) with substance abuse. This finding is consistent with the Rui Coelho et al, 2000⁵⁴ study which found a Depression prevalence rate of 51.2% in drug addicts.

He concluded that there was a high prevalence of depression in drug addicts, regardless of the type and duration of drug abuse.

The consequences of dual diagnosis are that when compared to patients who have mental health problems alone, they are more likely to have increased suicide rates, more severe mental health problems, homelessness, increased risk for violence, increased risk of victimization, more contact with the criminal justice system, family problems and poor compliance to medical treatment.

Their prognosis is thus worse with high levels of service use and heavy use of expensive resources. Thus to deal with the problem of comorbidity, the co-occurring major mental disorder must be diagnosed and treated as the substance abuse intervention is carried out.

The Null Hypothesis for this study was thus rejected and the Alternative Hypothesis accepted.

LIMITATION

The inherent vulnerability of the study population despite assurance of strict observance of confidentiality may have made the participants reluctant to give accurate and comprehensive details of their use of illicit drugs such as heroin and cocaine for fear of victimization. This may have thus accounted for the very low prevalence rates of use of these substances.

CONCLUSIONS

1. There is a high prevalence of substance abuse (74.8%) among forensic psychiatry inpatients. This coupled with low screening rates could have an important impact on the quality of treatment provided, including missing opportunities for substance abuse intervention.
2. It is universally agreed that majority of mentally-ill patients who are receiving appropriate treatment do not carry a greater risk of violence than the general population. However, major determinants for violence were found to include: sociodemographic (male gender) and socioeconomic factors (low levels of employment) and substance abuse (particularly of tobacco products and amphetamine-type stimulants).
3. Early identification and treatment of substance use problems in the mentally ill can thus significantly reduce the risk of violence.

4. Depressive illness is the most common co-occurring major mental disorder and its comorbid existence with substance abuse must be actively sought out and treated.

RECOMMENDATIONS

1. Staff in mainstream and forensic mental health services, particularly admitting psychiatrists, urgently need training in detecting and managing substance abuse. “To overlook or neglect substance abuse in the course of mental health treatment will result in poor treatment outcome.”⁵⁵
2. Rehabilitative services need to be expanded to accommodate the large number of forensic patients with substance abuse problems. Setting up a rehabilitation ward/unit within the Maximum Security Unit would go a long way to this end.

CHAPTER 10: APPENDICES

APPENDIX 1. CONSENT FORM

1a. INFORMED CONSENT EXPLANATION

To be read and questions answered in a language in which the subject is fluent.
(English or Kiswahili)

I, Dr. Lillian M. Bunyassi–Asuga wish to do a study entitled “Prevalence of Substance Abuse among forensic psychiatry inpatients at the Mathari Hospital, Nairobi, Kenya” .

The purpose of the study is to establish the magnitude of substance abuse among this group of patients under the supervision of Prof D. M. Ndetei and Dr. M.W. Kuria who are both lecturers at the Department of Psychiatry, University of Nairobi.

This is a medical research study and you are required to understand the following general principles, which apply to all in medical research:

- i) Your agreement is entirely voluntary,
- ii) You may withdraw from the study at any time,
- iii) Refusal to participate will not lead to any penalty or loss of benefit to which you are otherwise entitled.
- iv) After you read the explanation, please feel free to ask any questions that will allow you to understand clearly the nature of the study.

The procedure will involve my asking you questions concerning your history of use of substances such as alcohol, tobacco, cannabis, khat (miraa) and others. I will also ask you whether their use has led to any health, social, legal or financial problems.

I will ask you questions about your feelings, thoughts and behaviour too. These will be in the form of questionnaires. No invasive procedures such as drawing of blood will be involved.

All information obtained from this study will remain confidential and your privacy will be upheld. Identification will be by number only; no names will be used in this study or in its future publications. The inpatient file number will be used solely for the purpose of identifying those with a substance abuse disorder who need psychiatric intervention. These patients will then be referred to the Rehabilitation Unit for appropriate management.

I hope that information generated by this study will be of benefit, leading to the implementation of better interventions and comprehensive care for forensic inpatients to enable them become and remain alcohol and drug free hence reducing future risks for crime.

1b. CONSENT FORM.

I, the undersigned do hereby volunteer to participate in this study .The nature and purpose have been fully explained to me by Dr. Lillian M. Bunyassi–Asuga .

I understand that all information gathered will be used for purposes of this study only.

Signed _____ Date _____

Serial Number _____

Signed _____ Date _____

(DR. LILLIAN BUNYASSI-ASUGA)

APPENDIX 2: QUESTIONNAIRES

2A. SOCIODEMOGRAPHIC QUESTIONNAIRE

Date : _____

Serial number : _____

Inpatient number : _____

1. Age (years) _____

2. Sex _____

3. Residence (usual) _____

4. Religion _____ (Tick where appropriate)

- a) Catholic
- b) Protestant
- c) Muslim
- d) Other (please specify)

5. Highest level of education

- a) No formal education
- b) Primary
- c) Secondary
- d) Tertiary (College / University)

6. Martial Status

- a) Single
- b) Married
- c) Separated
- d) Divorced
- e) Widowed

7. Occupation

- a) Student
- b) Formal employment
- c) Informal employment (.e.g. Hawker)
- d) Business person
- e) Unemployed

8. Family history of mental illness

- a) Yes
- b) No

9. Nature of index offence (as per file)

- a) Violent offences
- b) Sexual offences
- c) Theft and handling of stolen goods
- d) Criminal damage (minor property damage to arson)

10. History of previous admissions?

- a) No
- b) Yes

If yes,

(i) Number of previous admissions

- a) 1
- b) 2
- c) More than 2

(ii) Duration of previous admission

- a) Days
- b) Months
- c) Years

(iii) Nature of previous admissions

- a) General
- b) Civil
- c) Criminal

11. Date of admission (current hospitalization) _____

**2B. Structured Clinical Interview for DSM IV Axis-1 Disorders (SCID-I)
screening module.**

Now I want to ask you some specific questions about problems you may have had.
We will go into more details later.

1 = NO (N) 2 = SUBTHRESHOLD (S) 3 = YES (Y)

**Response 2 OR 3 score means more probing needed .Go to the pages indicated in the brackets.
The following sections are mandatory: 1,2,3,8,9,20 and 21. All the same, try all sections.**

	<u>N</u>	<u>S</u>	<u>Y</u>
S1. Have there been any times in your life when you have had 5 or more drinks of alcohol on one occasion ? (4,5)	1	2	3
S2. Have you ever used drugs of addiction? (6)	1	2	3
S3. Have you ever gotten hooked on any prescribed medication or taken more of it than you were supposed to ? (Insert / give details at the back of the code sheet)	1	2	3
S4. Have you ever had a panic attack; when you suddenly felt frightened or anxious or Suddenly develop a lot of physical symptoms? (12)	1	2	3
S5. Were you ever afraid of going out of the house alone, being in crowds, standing in the line, traveling in taxis or buses? (13)	1	2	3
S6. Is there anything that you have been afraid to do or felt uncomfortable doing in front of other people, like speaking , eating or writing ? (14)	1	2	3
S7. Are there any other things that you have been afraid of like flying, seeing blood , heights, closed places or certain kinds of animals/ insects ? (15)	1	2	3
S8. Have you ever been bothered by thoughts that did not make any sense and kept coming back to you even when you tried not to have them ? (16)	1	2	3
S9. Was there ever anything that you had to do over again, that you could not resist doing, like washing your hands again and again, counting up a certain number, or checking something several times to make sure you had it right ? (17)	1	2	3
S10. Sometimes things happen to people that are extremely upsetting, like being in a life threatening situation like a major disaster, accidents or fire; being physically assaulted or raped; seeing another person killed or dead or badly hurt; or hearing about something horrible happening to someone close to you. At any time during your life, have any of these things happened to you? (17)	1	2	3
S11. In the last six months, have you been particularly nervous or anxious? (18,19)	1	2	3
S12. Have you been sick a lot over the year? (20)	1	2	3
S13. Have you ever had a time when you weighed much less than other people thought you ought to weigh ? (1,2,3,8,9,21)	1	2	3
S14. Have you often had times when your eating was out of control (as S13 above) ?	1	2	3
S15. Has there ever been a time when your mood was excessively high for several days or more? If yes, was any one of the following present? (10)			
(a) Were your thoughts racing?	1	2	3
(b) Were you bursting with energy?	1	2	3
(c) Did you think you had “ special” power or abilities ?	1	2	3

S16 Have you ever had unusual experiences, for example, interference of your thoughts, that your thoughts could be read; that messages could be put in your mind; that the radio, TV or newspaper were talking about you; that you were being spied on; or that you could hear voices that other people could not? (11) 1 2 3

NB: IF ANY OF THE ABOVE IS SCORED "2" OR "3", GO TO THE APPROPRIATE MODULE.

SCID MODULES

1. DESCRIPTIVE EPISODES

A1 Depressed mood for 2 or more weeks	1	2	3
A2 Loss of interest in daily activities	1	2	3
A3 Weight loss or gain	1	2	3
A4 Weight loss or decreased appetite	1	2	3
A5 Weight loss or increased appetite	1	2	3
A6 Insomnia	1	2	3
A7 Hypersomnia	1	2	3
A8 Psychomotor agitation	1	2	3
A9 Psychomotor retardation	1	2	3
A10 Fatigue or loss of energy			
A11 Feelings of inappropriate guilt	1	2	3
A12 Feelings of worthlessness	1	2	3
A13 Diminished ability to concentrate or think	1	2	3
A14 Indecisiveness	1	2	3
A15 Recurrent thoughts of own death	1	2	3
A16 Suicidal ideation	1	2	3
A17 Specific plan for suicide	1	2	3
A18 Suicide attempt	1	2	3
A19 At least 5 of the primary symptoms above are coded "3" and at least one of these is item A1 or A2 (Official only)	1		3
A20 Symptoms cause significant distress or impairment	1	2	3
A21 Not due to direct effect of substance or medical condition	1	2	3
A22 Not better accounted for by bereavement	1	2	3
A23 A major depressive episode (Official only)	1		3

2. DYSTHYMIC DISORDER

A83 Depressed mood for the past 2 years	1	2	3
A84 Poor appetite or over-eating	1	2	3
A85 Insomnia or hypersomnia	1	2	3
A86 Low energy or fatigue	1	2	3
A87 Low self-esteem	1	2	3
A88 Poor concentration or difficulty in making decisions	1	2	3
A89 Hopelessness	1	2	3
A 90 At least 2 symptoms above (A84–A89) ARE CODED "3" (Official only)	1		3

A 91	Symptoms have not been absent for more than 2 months	1	2	3
A92	No major depressive episode during first 2 years of disturbance	1	2	3
A93	Age of onset of current dysthymic disorder (Insert actual age in score sheet)			
A94	Has never had a manic or hypomanic episode	1	2	3
A95	Does not occur during course of chronic psychotic disorder	1	2	3
A96	Does not occur during course of chronic psychotic disorder	1	2	3
A97	Symptoms cause significant distress or impairment	1	2	3
A 98	Dysthymic disorder (Official only) { A83 , A90, A91,A95,A96 and A97 are all code”3”	1	2	3

3. DEPRESSIVE DISORDER NOT OTHERWISE SPECIFIED (NOS)

D7	Depressive symptoms that do not meet criteria for manic –depressive episode, dysthymia , adjustment disorder , or not accounted for by bereavement	1	2	3
D8	Not due to direct effect of a substance or medical condition	1	2	3
D9	Depressive disorder not otherwise specified (NOS) : (Official) Rate 1,2,3,4 or 5			
	1- Post–psychotic depressive disorder of schizophrenia			
	2- Major depressive disorder superimposed on delusional disorder, psychotic disorder not otherwise specified or active schizophrenia.			
	3 – Minor depressive disorder			
	4 – Recurrent brief disorder			
	5 – Other			
D9	Descriptive disorder not otherwise specified present in the last month	1 = Yes	2 = No	

4. SUBSTANCE USE DISORDERS:

ALCOHOL DEPENDENCE

A1	Alcohol taken in large amounts or for long periods	1	2	3
A2	Persistent desire or unsuccessful efforts to cut down	1	2	3
A3	Large amounts of time spent in activities obtaining alcohol	1	2	3
A4	Important activities given up or reduced	1	2	3
A5	Use continued despite physical or psychological problems	1	2	3
A6	Increased tolerance			
A7	Withdrawal; at least two of			
	(a) Sweating or	1	2	3
	(b) Racing heart,	1	2	3
	(c) Hand shakes,	1	2	3
	(d) Trouble sleeping ,	1	2	3
	(e) Feeling nauseated	1	2	3
	(f) Feeling agitated,	1	2	3
	(g) Feeling anxious,	1	2	3
	(h) Having a seizure,	1	2	3
	(i) Seeing or,	1	2	3
	(j) Hearing things that are not really there,	1	2	3

	(k) If no withdrawal, then alcohol to relieve withdrawal.	1	2	3
A8	Onset and course ;			
	(a) When did your drinking problems first start(insert date in the scores)			
	(b) How long did they go on for? (Insert in the score sheet)			

A9	Treatment :			
	(a) Did you see a doctor about your drinking problems?	1	2	3
	(b) Did you receive any treatment?	1	2	3
	(c) What treatment? (Insert in the score sheet)			
	(d) Did you seek any other professional help?	1	2	3
	(e) Did you seek any other professional help?	1	2	3
	(f) What help? (Insert in the score sheet)			

5. ALCOHOL ABUSE: At least one of the items A10 – A13 coded “3” if present in the last 12 months period.	1		3
A10 Failure to fulfill role	1	2	3
A11 Physically hazardous	1	2	3
A12 Legal problems	1	2	3
A13 Social problems	1	2	3

6. DRUG DEPENDENCE

Now I am going to ask you some specific questions about your use of
(drugs). Have you ever taken any of these to get high, to sleep better, to lose weight or to change your mood?

Sedatives / hypnotics / anxiolytics :Valium , Librium, barbituarates, Milltown, Ativan , Restoril, Seconal.

Cannabis : marijuana, hashish, bhang, tetrahydrocannabinol.

Stimulants: amphetamine / “ speed” , Crystal meth, Dexadrine, Ritalin / methylphenidate/ ‘ice’ .

Opioids :heroin, morphine, opium, Methadone, Darvon, Demerel, Dilaudid, Pethidine, codeine ,Pentazocine, methaqualone, Madrax.

Cocaine : intranasal, intravenous, ‘freebase’, ‘crack’ ,and ‘speedball’.

Hallucinogens: PCD, LSD, Mescaline, peyote, PCP (‘angel dust’), Ecstasy, MDMN, others.

Other drugs eg khat , nicotine, glue, paint, inhalants, nitrous oxide(‘laughing gas’).

B1 Large amounts /Longer periods.	1	2	3
B2 Persistent desire / unsuccessful efforts to control / cut down	1	2	3
B3 Great deal of time spent obtaining / recovering	1	2	3
B4 Social, occupations, recreations given up or reduced	1	2	3
B5 Use despite physiological / physical problems	1	2	3
B6 Tolerance (either markedly increased amounts for desired effects , or markedly diminished effects)	1	2	3

B7 Withdrawal			
(a) Ever had withdrawal symptoms when cut down or stopped drug?	1	2	3
(b) Ever taken more of drug to get rid of withdrawal symptoms?	1	2	3

LIST OF WITHDRAWAL SYMPTOMS

(a) <u>Sedatives / hypnotics / anxiolytics</u> : two or more of the following developing within several hours to a few days after cessation (or reduction) after heavy or prolonged use			
1. Automatic hyperactivity	1	2	3
1.Increased hand tremor	1	2	3
2.Insomnia	1	2	3
3.Nausea and vomiting	1	2	3
4.Transient visual, tactile or auditory hallucinations or illusions	1	2	3
5.Psychomotor agitation	1	2	3
6.Anxiety	1	2	3
7.Grandmal seizures	1	2	3
(b) <u>Stimulants</u> :			
(i) Cocaine:- dysphoric mood and two or more of the following physiological changes			
1.Fatigue	1	2	3
2.Vivid unpleasant dreams	1	2	3
3.Insomnia or hypersomnia	1	2	3
4.Increased appetite	1	2	3
5.Psychomotor retardation or agitation	1	2	3
(ii) Opioids: three or more of the following			
1.Dysphoric mood	1	2	3
2.Nausea and Vomiting	1	2	3
3.Lacrimation or rhinorrhoea	1	2	3
4.Muscle aches	1	2	3
5.Sweating, Piloerection	1	2	3
6.Diarrhoea	1	2	3
7.Yawning	1	2	3
8.Fever	1	2	3
9.Insomnia	1	2	3

7. DRUG ABUSE

B8 Recurrent use/failure to fulfill major roles / obligations	1	2	3
B9 Recurrent use in hazardous situations	1	2	3
B10 Recurrent use related to social problems	1	2	3
B11 Recurrent use related to social problems	1	2	3
B12 Onset and Course			
a) When did the drug problems first start? (insert on the score sheet)			
b) When did they finally stop? (insert on the score sheet)			

B13 Treatment

- | | | | |
|---|---|---|---|
| a) Did you see a doctor about the drug problems? | 1 | 2 | 3 |
| b) Did you receive any treatment? | 1 | 2 | 3 |
| c) What treatment? (insert on the score sheet) | | | |
| d) Did you seek any other professional help? | 1 | 2 | 3 |
| e) What help? (insert on the score sheet) | | | |
| f) How old were you when you first started taking drugs? (insert on the score sheet) | | | |

8. RECENT MAJOR DEPRESSIVE EPISODES; AT LEAST FIVE ITEMS C1-C9 CODED "3", ONE OF THEM C1 OR C2, IN SAME 2-WEEK PERIOD

- | | | | |
|--|---|---|---|
| C1 Depressed mood | 1 | 2 | 3 |
| C2 Diminished interest / pleasure | 1 | 2 | 3 |
| C3 Weight/appetite gain or loss | 1 | 2 | 3 |
| C4 Sleep disturbance: insomnia or hypersomnia or early waking | 1 | 2 | 3 |
| C5 Psychomotor agitation or retardation | 1 | 2 | 3 |
| C6 Fatigue or loss of energy | 1 | 2 | 3 |
| C7 Feeling of worthlessness or inappropriate guilt | 1 | 2 | 3 |
| C8 Diminished ability to concentrate or indecisiveness | 1 | 2 | 3 |
| C9 Recurrent thoughts of death, suicidal ideation, specific suicide plan or suicide attempt(s) | 1 | 2 | 3 |
| C10 Episode not due to medical condition/medical/substance | 1 | 2 | 3 |
| C11 Episode not following bereavement | 1 | 2 | 3 |
| C12 Treatment (insert on the score sheet) | | | |
| C13 When did your depression start? (insert on the score sheet) | | | |
| C14 How long did it go on? (insert on the score sheet) | | | |

9. PAST MAJOR DEPRESSIVE EPISODE

I would like to ask you about other times in your life when you have felt very low.

- | | | | |
|--|---|---|---|
| C15 Depressed mood | 1 | 2 | 3 |
| C16 Diminished interest/pleasure | 1 | 2 | 3 |
| C17 Weight/appetite gain or loss | 1 | 2 | 3 |
| C18 Sleep disturbance: insomnia or hypersomnia or early waking | 1 | 2 | 3 |
| C19 Psychomotor agitation or retardation | 1 | 2 | 3 |
| C20 Fatigue or loss of energy | 1 | 2 | 3 |
| C21 Feeling of worthlessness or inappropriate guilt | 1 | 2 | 3 |
| C22 Diminished ability to concentrate or indecisiveness | 1 | 2 | 3 |
| C23 Recurrent thoughts of death, suicidal ideation, specific suicide plan, or suicide Attempt(s) | 1 | 2 | 3 |
| C24 Episode not due to medical condition/medical/substance | 1 | 2 | 3 |
| C25 Episode not following bereavement | 1 | 2 | 3 |
| C26 Treatment (insert on the score sheet) | | | |
| C27 When did your depression start? (insert on the score sheet) | | | |
| C28 How long did it go on? (insert on the score sheet) | | | |

10. MANIA: CURRENT MANIC EPISODE. AT LEAST D1 PLUS ANY THREE D2-D7 (OR FOUR IF MOOD IS IRRITABLE) IN A WEEKS TIME (OR LESS IF ADMISSION NEEDED)

D1 Persistently elevated expansive or irritable mood	1	2	3
D2 Inflated self-esteem or grandiosity	1	2	3
D3 Decreased need for sleep	1	2	3
D4 Flight of ideas / subjective experiences or racing thoughts	1	2	3
D5 Distractibility (attention too easily drawn to unimportant or irrelevant stimuli)	1	2	3
D6 Increase in goal directed activity (socially, at work, school or sexually) or psychomotor agitation	1	2	3
D7(a) Excessive involvement in pleasurable activities that have high potential for painful experiences	1	2	3
D7(b) 3 Three or more of above (D1-D7): MANIC EPISODE (Official)	1		3
D8 Not due to a mixed episode	1	2	3
D9 Significant impairment in function	1	2	3
D10 Not due to medication, drug of abuse or medical condition	1	2	3
D11 (a) Past episodes of mania	1	2	3
(b) How many? (Insert the score sheet)			
D12 Treatment (Insert on the core sheet)			

11. SCHIZOPHRENIA:

E1 Delusions

1. Delusions of Reference	1	2	3
2. Persecutory Delusions	1	2	3
3. Grandiose Delusions	1	2	3
4. Somatic Delusions	1	2	3
5. Delusions Of Control	1	2	3
6. Bizarre Delusions	1	2	3
7. Thought Insertion	1	2	3
8. Thought Broadcasting	1	2	3
9. Thought Withdrawal	1	2	3
10. Other Delusions (Insert On The Score Sheet)			

E2 Hallucinations

1. Running commentary hallucinations	1	2	3
2. Third party hallucinations	1	2	3
3. Visual hallucinations	1	2	3
4. Tactile hallucinations	1	2	3
5. Commanding hallucinations that are obeyed			
6. Other hallucinations (insert on the score sheet)	1	2	3

E3 Disorganized speech

F4 Behaviour

1. Catatonic (motor immobility)	1	2	3
2. Excessive motoric activity	1	2	3
3. Extreme negativism	1	2	3
4. Posturing or stereotyped movements	1	2	3
5. Grossly disorganized speech	1	2	3
6. Grossly inappropriate affect	1	2	3
E5 negative symptoms			
1. Affective flattening	1	2	3
2. Alogia	1	2	3
3. Avolition	1	2	3
E6 Social/ occupation dysfunction	1	2	3
E7 Not schizoaffective or mood disorder	1	2	3
E8 Previous treatment (Insert in the score sheet)			
E9 If any two of E1-E5 are "3": SCHIZOPHRENIA	1		3

12. LIFE HISTORY OF PANIC DISORDER

Panic attack			
F1 Suddenly felt frightened, or anxious or developed physical symptoms	1	2	3
F2 Attacks came out of the blue	1	2	3
F3 How many attacks? (Insert in the score sheet)			
IF NONE STOP, HERE; IF PRESENT			
F4 Worry about implications?	1	2	3
F5 Concern about additional attacks?	1	2	3
F6 Significant Changes In Behaviour	1	2	3
F7 Criterion Panic Attack	1	2	3
F8 Abrupt/ Peak In 10 Minutes	1	2	3
F9 Autonomic Symptoms:			
(i) Heart race, pound or skip beat	1	2	3
(ii) Tremble / shake	1	2	3
(iii) Short of breath	1	2	3
(iv) Feel choking	1	2	3
(v) Have nausea, stomach upset or diarrhoea	1	2	3
(vi) Feel dizzy, unsteady or faint	1	2	3
(vii) Feel unreal	1	2	3
(viii) Fear of going crazy or dying	1	2	3
(ix) Tingling/numbness in parts of the body	1	2	3
(x) Flushes or chills	1	2	3
F10 Not Due To Substance or Medical Condition	1	2	3
F11 Life Time Panic Disorder: recurrent unexpected panics (at least two) with four or more autonomic symptoms	1		3

13. PANIC DISORDER WITH AGORAPHOBIA

F12 Situations

14. Away from home	1	2	3
15. Crowded places	1	2	3
16. Standing in a queue	1	2	3
17. Being on a bridge	1	2	3
18. Using public transport	1	2	3

F13 Endured with marked distress

LIFE TIME AGORAPHOBIA (NO HISTORY OF PANIC ATTACK)

F14 Agoraphobic symptom (being alone, in a crowd, in queue public transport or other)	1	2	3
---	---	---	---

IF "NO", STOP HERE.

F15 Endured with marked distress	1	2	3
----------------------------------	---	---	---

F16 Avoidance	1	2	3
---------------	---	---	---

F17 Not due to substance or medical condition	1	2	3
---	---	---	---

14. LIFETIME SOCIAL PHOBIA

F18 Marked and persistent fear in social situations	1	2	3
---	---	---	---

IF "NO", STOP HERE

F19 Exposure to feared social situations almost invariably provokes anxiety	1	2	3
---	---	---	---

F20 Fear is excessive	1	2	3
-----------------------	---	---	---

F21 Avoidance	1	2	3
---------------	---	---	---

F22 Endured with marked distress	1	2	3
----------------------------------	---	---	---

F23 Interfered with normal routine	1	2	3
------------------------------------	---	---	---

F24 Not due to substance or medical condition	1	2	3
---	---	---	---

15. LIFETIME SPECIFIC PHOBIA

F25 Marked and persistent fear of flying, seeing blood, heights, closed places, certain kind of animals or insects	1	2	3
--	---	---	---

IF "NO", STOP HERE

F26 Exposure to feared phobic stimulus invariably provokes anxiety	1	2	3
--	---	---	---

F27 Fear excessive	1	2	3
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F28 Avoidance	1	2	3
---------------	---	---	---

F29 Endured with marked distress	1	2	3
----------------------------------	---	---	---

F30 Interference with normal routine	1	2	3
--------------------------------------	---	---	---

F31 Not due to substance or medical condition	1	2	3
---	---	---	---

16. LIFE TIME OBSESSIVE COMPULSIVE DISORDER (OCD)

F32 Obsessions: recurrent and persistent thoughts/impulses/images	1	2	3
---	---	---	---

IF "NO", STOP HERE.

F33 Attempts to ignore or suppress such thoughts	1	2	3
F34 Thoughts/images/impulses recognized as coming from own mind	1	2	3
F35 Compulsions: Repetitive behaviour e.g. washing, counting, checking	1	2	3
F36 Behaviour aimed at preventing or reducing mental distress or preventing some dreaded event/situation	1	2	3
IF "NO", TO OBSESSION OR COMPULSIONS, STOP HERE.			
F37 Excessive thoughts	1	2	3
F38 Marked distress/time consuming	1	2	3
F39 Not due to substance medical condition	1	2	3

17. LIFETIME POST TRAUMATIC STRESS DISORDER (PTSD)

F106 Traumatic Event List: (Score for each one of them 0=not present; or 1=present)

(i) Been involved in a road or motor accident?	0	1
(ii) Been attacked with a gun?	0	1
(iii) Been attacked with a knife or a similar weapon?	0	1
(iv) Any member of your family been attacked with a gun?	0	1
(v) Any member of your family been attacked with a knife or a similar weapon?	0	1
(vi) Ever been physically assaulted, causing you bodily harm?	0	1
(vii) Been sexually assaulted/raped?	0	1
(viii) Your house been burned by fire?	0	1
(ix) Been caught up in a riot?	0	1
(x) Been robbed in armed robbery or mugged?	0	1
(xi) Your house/home been broken into by armed robbers?	0	1
(xii) Been involved in a car-or matatu-jacking?	0	1
(xiii) Been involved in a life-threatening flood?	0	1
(xiv) Been involved in tribal clashes?	0	1
(xv) Witnessed violence in the street, neighbourhood, or school?	0	1
(xvi) Been robbed?	0	1
(xvii) Seen family members injured, beaten, hurt or killed?	0	1
(xviii) Been beaten or physically hurt, beaten or hurt?	0	1
(xix) Been physically hurt or attacked by a non-family member?	0	1
(xx) Others (specify/insert in the score sheet)	0	1

F107 (a) Experienced, witnessed, or was confronted with an event involving actual or threatened death, serious injury, or the physical integrity of self or others, e.g. a very serious accident or fire; being physically assaulted or raped; seeing another person killed, dead or badly injured

1 2 3

(b) Hearing about something horrible that has happened to someone close to you	1	2	3
IF "NO", STOP HERE.			
F108 Response: involved intense fear, helplessness or horror	1	2	3
F109 recurrent, intrusive and distressing recollections (including images, thoughts, perceptions)	1	2	3
F110 Recurrent distressing dreams	1	2	3
F111 Re-living the experience	1	2	3
F112 Autonomic symptoms	1	2	3
F113 Intense psychological distress to cues	1	2	3
F114 At least one of the above (F109-F113) coded "3" (Official)	1		3
IF NO SYMPTOM PRESENT, STOP HERE.			
F115 Efforts to avoid thoughts, feelings, conversation about event	1	2	3
F116 Efforts to activities, places or conversation about event	1	2	3
F117 Inability to recall an important aspect	1	2	3
F118 Diminished interest or participation in activities	1	2	3
F119 Detachment or estrangement from others	1	2	3
F120 Restricted range of affect	1	2	3
F121 Sense of foreshortened future	1	2	3
F122 At least three of the above (F115-F121) coded "3" (Official)	1		3
F123 Difficulty falling or staying asleep	1	2	3
F124 Irritability or outburst of anger	1	2	3
F125 Difficulty in concentrating	1	2	3
F126 Hypervigilance	1	2	3
F127 Exaggerated startle response	1	2	3
F128 At least two of the above (F123-F127) CODED "3" (Official)	1		3
F129 Duration at least one month	1	2	3
F130 Causes marked distress or significantly interferes	1	2	3
F131 Post – Traumatic Stress Disorder F107, F108, F114, F122, F122, F128, F130 all coded "3" (Official)	1		3
F132 Current PTSD (symptoms of PTSD in past month) (Official)	1		3

18. GENERALISED ANXIETY DISORDER (GAD)

F138 Excessive anxiety and worry	1	2	3
F139 Difficult to control	1	2	3
F140 Not during mood disorder or psychotic disorder	1	2	3
F141 Restless, keyed up or on edge	1	2	3
F142 Easily fatigued	1	2	3
F143 Difficulty in concentrating	1	2	3
F144 Irritability	1	2	3
F145 Muscle tension	1	2	3
F146 Sleep disturbance	1	2	3
F147 At least three of the above (F141-F146) coded "3" (Official)	1		3
F148 Focus not confined to another axis I disorder	1	2	3

F149 Distress or impairment	1	2	3
F150 Not due to direct effects of a substance or medical condition	1	2	3
F151 Generalized anxiety disorder (F138, F140, F150 ALL CODED "3") (Official)	1		3

19. ACUTE STRESS DISORDER

J9 Numbing, detachment or absence of emotional response	1	2	3
J10 Reduction in awareness of surroundings	1	2	3
J11 Derealization	1	2	3
J12 Depersonalization	1	2	3
J13 Dissociative amnesia	1	2	3
J14 At least three of the above (J9-J13) coded "3" (Official)	1		3
J15 Causes marked distress or significantly interferes	1	2	3
J16 Duration at least 2 days and less than 4 weeks; and occurs within 4 weeks of traumatic event	1	2	3
J17 Not due to direct effects of a substance or medical condition	1	2	3
J18 ACUTE STRESS DISORDER			
(J6-J9) all code "3" and F107, F114, F122, F128 all code "3" (Official)	1		3
J19 ACUTE CURRENT STRESS DISORDERS			
(Symptoms of Acute Stress Disorder in past month) (Official)	1		3

20. SOMATIZATION DISORDER

G1 Screen 12-Somatization Disorder (Official)	1		3
G2 History of many physical complaints before age 30 (Official)	1		3
G3 Age at onset (insert on the score sheet)			
G4 Impaired co-ordination or balance	1	2	3
G5 Paralysis or localized numbness	1	2	3
G6 Difficulty swallowing or lump throat	1	2	3
G7 Aphonia	1	2	3
G8 Urinary retention	1	2	3
G9 Loss of touch or pain sensation	1	2	3
G10 Double vision	1	2	3
G11 Blindness	1	2	3
G12 Deafness	1	2	3
G13 Seizures	1	2	3
G14 Amnesia	1	2	3
G15 Loss of consciousness	1	2	3
G16 One symptom above (G4-G15) code "3" (Official)	1		3
G17 Head pain	1	2	3
G18 Stomach pain	1	2	3
G19 Back pain	1	2	3
G20 Joint pain	1	2	3
G21 Pain in the extremities	1	2	3

G22 Chest pain	1	2	3
G23 For women, pain during menstruation	1	2	3
G24 Pain during intercourse	1	2	3
G25 Pain during urination	1	2	3
G26 Pain anywhere else	1	2	3
G27 Four symptoms above (G17-G26) coded "3" (Official)	1		3
G28 Nausea	1	2	3
G29 Bloating	1	2	3
G30 Vomiting other than during pregnancy	1	2	3
G31 Diarrhoea	1	2	3
G32 Intolerance of several foods	1	2	3
G33 Sexual indifference	1	2	3
G34 Two symptoms above (G28-G33) coded "3" (Official)	1		3
G35 Irregular menses	1	2	3
G36 Excessive Menstrual bleeding	1	2	3
G37 Vomiting Through Out Pregnancy	1	2	3
G38 One symptom above coded "3"	1		3
G39 Somatization Disorder (G2, G16, G27, F34, G38) all coded "3" (Official)	1		3

21. ADJUSTMENT DISORDER

H1 Emotional or behavioural symptoms in response to an identifiable stressor occurring within 3 months of stressor e.g. divorce, diagnosis of a terminal illness	1	2	3
H2 The symptoms cause marked distress in excess of what would be expected	1	2	3
H3 The symptoms cause significant impairment in social or occupational functioning	1	2	3
H4 The symptoms do not represent Bereavement	1	2	3
H5 Once the stressor has terminated, the symptoms do not persist for more than an additional 6months	1	2	3
H6 Predominant symptoms may be depressed mood, anxiety, mixed or disturbance of conduct	1	2	3

22. DELIRIUM

K1 Disturbance of consciousness with reduced ability to focus, sustain or shift attention	1	2	3
K2 Change in cognition not due to established or evolving dementia	1	2	3
K3 Disturbance develops over a short period of time (hours to days) and tends to fluctuate during the course of the day	1	2	3
K4 Disturbance is not caused by direct physiological consequences of a general medical condition	1	2	3

23. DEMENTIA

L1 Impaired ability to learn new information or to recall previously learned information	1	2	3
L2 One or more of:			
(i) Aphasia	1	2	3
(ii) Apraxia	1	2	3
(iii) Agnosia	1	2	3
(iv) Disturbance in executive functioning i.e. planning, organizing	1	2	3
L3 Cognitive deficits in L1 and L2 cause significant impairment in social or occupation functioning and represent a significant decline from a previous level of functioning	1	2	3
L4 Course is characterized by gradual onset and continuing decline	1	2	3
L5 Deficits do not occur exclusively during the course of a delirium	1	2	3

SCID SCORE SHEET

SCREENING PAGE

S1---S2---S3---S4---S5---S6---S7---S8---S9---S10---S11---S12---S13---S14---S15---
S15(a)---S15(b)---
S15(c)---S16---

1. DEPRESSIVE EPISODES

A1---A2---A3---A4---A5---A6---A7---A8---A9---A10---A11---A12---A13---A14---15---
A16---A17---A18---
A19*---A20---A21---A22---A23*---

2. DYSHYMIC DISORDERS

A83---A84---A85---A86---A87---A88---A89---A90*---A91---A92---A93---A94---
A95---A96---A97---A98*---

3. DEPRESSION DISORDERS NOT OTHERWISE SPECIFIED

D7---D8---D9---D10*---

4. SUBSTANCE USE DISORDERS:

ALCOHOL DEPENDENCE

A1---A2---A3---A4---A5---A6---A7(a)---A7(b)---A7(c)---A7(d)---A7(e)---7(f)---
A7(g)---
A7(h)---A7(i)---A7(j)---A7(k)---A8(a)---A8(b)---A9(c)---A9(d)---
A9(e)-----A9(f)-----
A9(g)-----

5. ALCOHOL ABUSE

A10---A11---A12---A13---

6. DRUG DEPENDENCE

B1---B2---B3---B4---B5---B6---B7(a)---B7(b)---
a) Sedatives: a)1---a)2---a)3---a)4---a)5---a)6---a)7---a)8---
b) Stimulants
(i) Cocaine:- b)(i)1---b)(i)2---b)(i)3---b)(i)4---b)(i)5---
(ii) Opioids:- b)(ii)1---b)(ii)2---b)(ii)3---b)(ii)4---b)(ii)5---b)(ii)6---b)(ii)7---b)(ii)8---b)(ii)9---

7. DRUG ABUSE

B8---B9---B10---B11---B12(a)---B12(b)---B13(a)---B13(b)---
B13(c)-----
B13(d)---B13(e)------(f)-----

8. RECENT MAJOR DEPRESSIVE EPISODE

C1---C2---C3---C4---C5---C6---C7---C8---C9---C10---C11---
C12-----C13---C14---

9. PAST MAJOR DEPRESSIVE EPISODE

C15-----C16-----C17-----C18-----C19-----C20-----C21-----C22-----C23-----C24-----C25-----
C26-----C27-----C28-----

10. CURRENT MANIC EPISODE

D1---D2---D3---D4---D5---D6---D7---D8---D9---D10---D11(a)---D11(b)-----
D12-----

11. SCHIZOPHRENIA

E1 Delusions: 1-----2-----3-----4-----5-----6-----7-----8-----9-----10-----
E2 Hallucinations:
1-----2-----3-----4-----5-----6-----
E3 Disorganized speech -----
E4 Behaviour: 1-----2-----3-----4-----5-----6-----7-----
E5 Negative Symptoms 1-----2-----3-----**E6**-----**E7**-----
E8-----
E9-----

12. LIFE HISTORY OF PANIC DISORDER

F1---F2---F3---F4---F5---F6---F7---F8---F9(i)---F9(ii)--- F9(iii)--- F9(iv)--- F9(v)---
F9(vi)--- F9(vii)---
F9(viii)--- F9(ix)--- F9(x)--- F10--- F11---

13. PANIC DISORDER WITH AGORAPHOBIA

F12(i)---F12(ii)---F12(iii)---F12(iv)---F12(v)---F13---F14---F15---F16---F17---

14. LIFE TIME SOCIAL PHOBIA

F18--- F19--- F20--- F21--- F22--- F23--- F24---

15. LIFE TIME SPECIFIC PHOBIA

F25--- F26--- F27--- F28--- F29--- F30--- F31---

16. LIFE TIME OBSESSIVE COMPULSIVE DISORDER

F32--- F33--- 34--- F35--- F36--- F37--- F38---F39---

17. POST TRAUMATIC STRESS DISORDERS-LIFE TIME

F106---F107(a)---F107(b)---F108---F109---F110---F111---F112---F113---
F114*---F115---F116---F117---
F118---F119---F120---F121---**F122***---F123---F124---F125---F126---
F127---**F128***---F129---F130--- **F131***---(1962—1972—1982—1992—2002--)**F132***---

18. GENERALIZED ANXIETY DISORDER

F138---F139---F140---F141---F142---F143---F144---F145---F146---F147*---F148---F149---F150---F151

19. ACUTE STRESS DISORDER

J9---J10---J11---J12---J13---J14*---J15---J16---J17---J18*---J19*---

20. SOMATIZATION DISORDER

G1*---G2*---G3---G4---G5---G6---G7---G8---G9---G10---G11---G12---G13---G14---15---

16*---G17---

G18---G19---G20---G21---G22---G23---G24---G25---G26---G27---G28---G30---G31---

G32---G33---

G34*---G35---G36---G37---G38---G39*---

21. ADJUSTMENT DISORDERS

H1---H2---H3---H4---H5---H6---

22. DELIRIUM

K1---K2---K3---K4---

23. DEMENTIA

L1---L2(i)---L2(ii)---L2(iii)---L2(iv)---L3---L4---L5

2C. THE ALCOHOL, SMOKING AND SUBSTANCE INVOLVEMENT SCREENING TEST (ASSIST)

1. In your life, which of the following substances have you <u>Ever used?</u>	0=No		1=Yes		
(a) Tobacco products (cigarettes, chewing tobacco, cigars etc.)					
(b) Alcoholic beverages (beer, wine, spirits, changaa, (kumi kumi).					
(c) Caffeine					
(d) Cannabis (marijuana, pot, grass, hash, bhang)					
(e) Cocaine (coke, crack, etc)					
(f) Amphetamine type stimulants (speed, diet pills, ecstasy, Khat/Miraa)					
(g) Inhalants (nitrous, glue, petrol, paint thinner, etc.)					
(h) Sedatives or sleeping pills (Valium, Serepax, Rohypnol.)					
(i) Hallucinogens (LSD, acid, mushrooms, PCP, Special K,)					
(j) Opioids (heroin, morphine, codeine, Brown sugar)					
(k) Other – specify					
Q2 – Q5 tick: 0=Never, 1=once or twice, 2=Monthly, 3=Weekly 4=Daily or almost daily	0	1	2	3	4
2. In the past 3 months, how often have you used the substance you mentioned?					
(a) Tobacco products (cigarettes, chewing tobacco, cigars, etc.)					
(b) Alcoholic beverages (beer, wine, spirits, changaa, (kumi kumi.)					
(c) Caffeine					
(d) Cannabis (marijuana, pot, grass, hash, bhang)					
(e) Cocaine (coke, crack, etc)					
(f) Amphetamine type stimulants (speed, diet pills, ecstasy, Khat/Miraa)					
(g) Inhalants (nitrous, glue, petrol, paint thinner, etc.)					
(h) Sedatives or sleeping pills (Valium, Serepax, Rohypnol.)					
(i) Hallucinogens (LSD, acid, mushrooms, PCP, Special K,)					
(j) Opioids (heroin, morphine, codeine, Brown sugar)					
(k) Other – specify					

3. During the past 3 months, substance you have mentioned in Q1 how often have you had a strong desire or urge to use them?					
(a) Tobacco products (cigarettes, chewing tobacco, cigars, etc.)					
(b) Alcoholic beverages (beer, wine, spirits, changaa, (kumi kumi.)					
(c) Caffeine					
(d) Cannabis (marijuana, pot, grass, hash, bhang)					
(e) Cocaine (coke, crack, etc)					
(f) Amphetamine type stimulants (speed, diet pills, ecstasy, Khat/Miraa)					
(g) Inhalants (nitrous, glue, petrol, paint thinner, etc.)					
(h) Sedatives or sleeping pills (Valium, Serepax, Rohypnol.)					
(i) Hallucinogens (LSD, acid, mushrooms, PCP, Special K.)					
(j) Opioids (heroin, morphine, codeine, Brown sugar)					
(k) Other – specify					
4. During the past 3 months, how often has your use of drugs mentioned in question Q1 led to health, and social, legal or financial problems? (Specify the four leading drugs).					
Health problems (specify the four leading drugs).					
Drug i)					
Drug ii)					
Drug iii)					
Drug iv)					
Social problems (specify the four leading drugs).					
Drug i)					
Drug ii)					
Drug iii)					
Drug iv)					
Legal Problems (specify the four leading drugs).					
Drug i)					
Drug ii)					
Drug iii)					

Drug iv)				
5. During the past 3 months, how often have you failed to do what was normally expected of you because of your use of: (specify the four leading drugs).				
Drug i)				
Drug ii)				
Drug iii)				
Drug iv)				
Q6 – Q8 0=No, Never, 1=Yes, but not in the past 3 months, or 2=yes in the past 3months				
6. Has a friend of relative or anyone else ever expressed concern about your use of drug (if yes specify the four leading drugs)	0	1	2	
Drug i)				
Drug ii)				
Drug iii)				
Drug iv)				
Q7 Have you ever tried to control, cut down or stop using drug (if yes specify the four leading drugs)				
Drug i)				
Drug ii)				
Drug iii)				
Drug iv)				
8. Have you ever used any drug by injection (non-medical use only) (if yes specify the four leading drugs)				
Drug i)				
Drug ii)				
Drug iii)				
Drug iv)				

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