

**STUDY TITLE : KNOWLEDGE , ATTITUDE AND
PRACTICE ON SUBSTANCE USE AMONG HIGH
SCHOOL STUDENTS IN NAIROBI, KENYA .**

**A THESIS SUBMITTED IN PART FULFILLMENT FOR THE
AWARD OF THE DEGREE OF MASTERS OF PUBLIC HEALTH**

OF THE UNIVERSITY OF NAIROBI

**MEDICAL LIBRARY
UNIVERSITY OF NAIROBI**

DR JANE ONG'ANG'O MB . ChB (NBI)

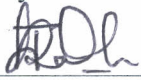
University of NAIROBI Library



0324891 1

DECLARATION

I, Dr. Jane Ong'ang'o declare that this thesis is my original work. It has not been presented to any other institution for the purpose of obtaining a degree.

Signed 

Date 26 / 4 / 2001

Dr. Jane Ong'ang'o, MB ChB (Nbi)

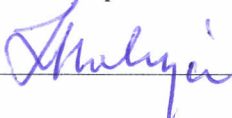
APPROVAL

This thesis has been submitted for examination as part fulfilment for the award of the degree of Master of Public Health of the University of Nairobi with our approval as supervisors.

Internal Supervisors

DR. J. OLENJA, BEd, M Phil, PhD

Senior Lecturer, Department of Community Health, University of Nairobi.

Signature 

Date 27/4/2001

DR. E.N.NGUGI, BSc, MA, Ph.D

Senior Lecturer, Department of Community Health, University of Nairobi.

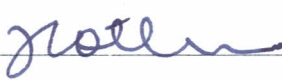
Signature 

Date 30/4/2001

External Supervisor

DR. C. OTHIENO, MBChB, M.Med (Psychiatry).

Lecturer, Department of Psychiatry, University of Nairobi.

Signature 

Date May 8, 2001

Approved by the Chairman, Department of Community Health, College of Health Sciences, University of Nairobi.

PROF V.KIMANI, BA, MA, Ph.D

Associate Professor and Chairman, Department of Community Health,

University of Nairobi.

Signed 

Date 10/5/2001

DEDICATION

This thesis is dedicated to my family : My father Esau; mother Norah; husband Herbert and our children Laban, Josephat and Davies.

ACKNOWLEDGEMENTS

I am grateful to the following people who enabled me to accomplish the study. My supervisors, Dr. J. Olenja, Dr. E. Ngugi and Dr. C. Othieno for their guidance. The Ministry of Education and the Nairobi Provincial Education office for giving me support and permission to carry out the study in schools. The Heads of Schools where I collected data, for their co-operation and support. I also thank the research assistant and all the students who participated in the exercise. Mr.C. Odeka who helped in data analysis. All members of staff in The Department of Community Health for the support they accorded me. Special thanks to Dr. J. P. Rakwar for the effort he took in reading my work and giving the necessary comments and advice.

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
TITLE.....	i
DECLARATION	ii
APPROVAL	iii
DEDICATION	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	xi
LIST OF ABBREVIATIONS	xii
DEFINITION OF CONCEPTS	xiii
ABSTRACT	xiv
CHAPTER 1 : INTRODUCTION	1
1.1 BACKGROUND	4
CHAPTER 2 : LITERATURE REVIEW	13
CHAPTER 3 : STATEMENT OF RESEARCH PROBLEM.....	25
3.1 THE RESEARCH PROBLEM.....	25
3.2 JUSTIFICATION OF THE STUDY.....	26
3.3 OBJECTIVES OF THE STUDY.....	27
3.3.1 BROAD OBJECTIVE.....	27
3.3.2 SPECIFIC OBJECTIVES.....	27
3.4 HYPOTHESIS.....	27

CHAPTER 4: METHODS AND MATERIALS.....	28
4.1. STUDY DESIGN	28
4.2. VARIABLES.	28
4.3. STUDY AREA.	30
4.4. STUDY POPULATION.....	31
4.5 SAMPLING.....	31
4.5.1 SELECTION OF STUDY SUBJECTS	31
4.5.2 SAMPLE SIZE.....	33
4.6 ETHICAL CONSIDERATIONS	33
4.7 DATA COLLECTION.....	34
4.8 MINIMISING BIAS AND ERRORS	34
4.9 DATA PROCESSING AND ANALYSIS	35
CHAPTER 5 : RESULTS.....	36
5.1 SOCIAL DEMOGRAPHIC CHARACTERISTICS.....	36
5.2 KNOWLEDGE ON DRUGS	39
5.3 ATTITUDE TOWARDS DRUG USE	46
5.4 PRACTICE OF DRUG USE	53
CHAPTER 6 : DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS	65
6.1 DISCUSSION	65
6.2 LIMITATIONS OF THE STUDY.....	76
6.3 CONCLUSIONS	77
6.4 RECOMMENDATIONS	79

CHAPTER 7 : REFERENCES.....	82
APPENDIX I : QUESTIONNAIRE.....	88
APPENDIX II : GUIDELINES FOR FOCUS GROUP DISCUSSIONS.....	97
APPENDIX III : GUIDELINES FOR IN-DEPTH INTERVIEWS.....	98

LIST OF TABLES

	PAGE
Table 1: Relationship between sex and level of knowledge on the effects of Tobacco	42
Table 2: Relationship between the level of knowledge on the effects of Miraa and being Day Scholar or Boarder	43
Table 3: Relationship between the level of knowledge on the effects of Tobacco and being a Day Scholar or Boarder	43
Table 4: Relationship between level of knowledge on the effects of Miraa and Hobbies/Clubs	44
Table 5: Approval/Disapproval of Drug Use	48
Table 6: Approval/Disapproval of Drug use by Sex	49
Table 7: Relationship between Class and Approval/Disapproval use of Alcohol	50
Table 8: Relationship between being a Day scholar/Boarder and Approval/Disapproval of Miraa use.....	51
Table 9: Views on the Users	51
Table 10: Relationship between Ever use of Alcohol and Sex	53
Table 11: Use of Drug in the past 12 months by Sex	54
Table 12: Relationship between Ever use of Alcohol and Hobbies among both Sexes	54
Table 13: Relationship between Attitude towards use of Alcohol and past 12 month use of alcohol among both Sexes.....	55

Table 14: Relationship between Class and Past 12 month use of alcohol among both Sexes	56
Table 15: Use of Drugs in the Past 12 months by Day Scholar / Boarder among both Sexes	57
Table 16: Relationship between past 12 month use of alcohol and past 12 month use of Tobacco among both Sexes	57
Table 17: Relationship between past 12 month use of Tobacco and past 12 month use of Miraa among both Sexes	57
Table 18: Age on first use of drugs among respondents	58
Table 19: Common Place of Drug Use	59
Table 20: Multivariate Regression Model for Past 12 Months use of Alcohol	61
Table 21: Multivariate Regression Model for Past 12 Months use of Tobacco	62
Table 22: Multivariate Regression Model for Past 12 Months use of Miraa	63
Table 23: Multivariate Regression Model for Past 12 Months use of Bhang	64

LIST OF FIGURES

	PAGE
Figure 1: Distribution of Students by Age	36
Figure 2: Distribution of Students by Level of Class	37
Figure 3: Distribution of Students by Religion	37
Figure 4: Percentage of Day Scholars / Boarders	38
Figure 5: Distribution of Students by Activities	38
Figure 6: Knowledge on Drugs	40
Figure 7: Level of Knowledge on the effects of Drugs	42
Figure 8: How Serious is the Problem?	46
Figure 9: Are You Affected by Advertisements?	52

LIST OF ABBREVIATIONS

WHO -	World Health Organisation
UNDCP -	United Nations International Drug Control Programme
AMREF -	African Medical Research Foundation
HIV -	Human Immunodeficiency Virus
AIDS -	Acquired Immunodeficiency Syndrome
IFLD -	International Institute for Prevention of Drug Abuse
JKIA -	Jomo Kenyatta International Airport
NGO -	Non – Governmental Organisation
USA -	United States of America
UN -	United Nations
FGD -	Focus Group Discussion
BB -	Boys Boarding
BD -	Boys Day
GB -	Girls Boarding
GD -	Girls Day
MD -	Mixed Day
MB -	Mixed Boarding

DEFINITION OF CONCEPTS

Drugs/Substances : in this context refers to Alcohol, Tobacco, Miraa and Bhang. These were the only drugs / substances that the study focused on. The words drug or substance are used interchangeably to mean the same thing, a drug being a substance that modifies the functions of a living organism when administered. This study dealt with mind altering drugs which are known as psychoactive drugs/substances that may be either medicinal or other substances.

Drug User : in this context refers to any student involved in the use of any or all the four drugs studied. Among the users, there are abusers with different consequences from drug use.

Alcohol : this refers to any alcoholic beverage be it commercial beer, the local brews, the spirits or the wines.

Tobacco : this refers to smoking tobacco only.

Miraa/Khat : these two words are used interchangeably while meaning the same drug. Khat (*catha edulis*) is the scientific name while miraa is the local name.

Bhang/Cannabis : these words are also used interchangeably while meaning the same drug. Bhang is the local name, while *cannabis sativa* is the full scientific name.

ABSTRACT

The main objective of this study was to determine the knowledge, attitude and practice of substance use among high school students. This study focused on alcohol, tobacco, miraa and bhang. The study was carried out in Nairobi Province in both public and private schools, which were either boarding or day schools. This was a cross-sectional study with focus group discussions and in-depth interviews. Multistage sampling was done and 481 students filled a standardised self-administered questionnaire.

Most of the students had fair knowledge about the drug effects. This knowledge ranged from 72.4% for alcohol to 62.4% for tobacco. Ninety-nine percent of the respondents felt that drug use was a serious problem among high school students. There was a strong disapproval among the students towards the use of the various drugs in the following percentages 47%, 54%, 45% and 64% for alcohol, tobacco, khat and bhang respectively. However the Form 2 and 4 students seemed liberal in attitude and behaviour towards the use of these drugs while the Form 1 pupils were more emphatic to reject use and the Form 3 students seemed to be inbetween the two extremes. Use of miraa was significantly more likely to be approved by the day scholars than the boarders ($p = 0.008$). Attitude was significantly related to past year use of alcohol ($p = 0.0017$) or miraa ($p = 0.0026$), so that poor attitude was a predictor to the use of alcohol or miraa. The level of knowledge on the effects of the drugs on use was not related to the use of any of the drugs ($p > 0.05$). There was no significant relationship between being a day scholar or boarder and the use of the various drugs.

Lifetime prevalence drug use ranged from 57.5% for alcohol to 12.9% for bhang for the males, while the females had a range of 44.9% for alcohol to 6.6% for bhang. Past year use prevalence had a similar trend but with lower percentages. Being in the informal clubs or activities was significantly related to lifetime use of alcohol ($p=0.002$) and miraa ($p=0.03$). Similarly the past year use of alcohol had a significant relationship with the informal clubs ($p=0.04$). Poly-drug use was common among the tobacco smokers and there was significant relationship between tobacco smoking and the use of alcohol ($p=0.002$), miraa ($p=0.001$) or bhang ($p < 0.05$). Initiation into the use of these drugs was found to be mainly by friends from their peer groups. Other initiators included family members like parents or older siblings, drug pushers/dealers. Many miscellaneous reasons for non-use or stopping to use drugs were mentioned, these included 'smoking gives you a bad breath', 'chewing miraa is disgusting', 'bhang made me feel bad'. These could be used as a basis for developing Health Education for this population. Lack of confidentiality in the counselling departments of schools, poor example from teachers/parents, poor communication with parents and lack of access to psychologists or psychiatrists are some of the reasons given by the students for not fully accepting the intervention strategies that should help them out of drug problems. The focus group discussions suggested ways of improving prevention of drug use, this included rehabilitation of drug victims, increased awareness of the problem in schools starting from upper primary and encouragement of peer counselling among students.

It can be recommended from the study that Health Education information should contain all aspects about drugs so as to give comprehensive knowledge, attitude and skills for effective change. Health Education messages on drug use should be developed with the purpose of gathering the attention of target groups which include the upper primary and high school classes, the informal clubs/activities, tobacco users and community groups. Peer counselling should be instituted in all schools and all intervention areas should have a conducive environment that encourages students to seek help and support from their strategies.

CHAPTER 1: INTRODUCTION

Adolescence and young adulthood are the periods most associated with the onset of substance/drug use world-wide (1). The youth being the future generation for any community clearly indicates that there is a need for initiatives to be targeted towards young people for the prevention of substance use and abuse.

Definitions

A **drug** is any substance, which when taken into the living organism may modify one or more of that organisms' functions (2). This definition covers a diverse range of naturally and synthetic substances which have a wide range of medical usage. Mind altering drugs are known as psychoactive drugs. These alter the mental state and function and are the drugs most commonly abused. The alterations caused by these drugs can be sedative, thus depressing brain function, producing calmness, sleep, and if excessive, coma and death. They may also be stimulants producing alertness and hilarity. Drugs may also cause bizarre effects on the mental state, to the extent that one may develop hallucinations or have disturbances of perception of the environment, which is perceived in a distorted way. The use of psychoactive drugs is firmly established in medical practice. The drugs used include narcotics for pain relief, tranquillisers for symptoms of stress and anxiety, antidepressants for depressive disorders.

Substance abuse has been defined by Asuni et al. (3) as 'excessive or inappropriate use of psycho-active substance by a person; such use being considered or judged to be illegal/immoral by the culture and resulting in harm to the person or society'. In this

definition, the phenomenon is determined by the perception of society as to what constitutes substance abuse. According to the Diagnostic and Statistical Manual of Mental Disorders – IV 1994, **substance abuse** is defined as being characterised by the presence of at least one specific symptom that indicates that substance use has interfered with the person's life (4). Interference with one's life may include any of the following; failure to fulfil major role obligations at work, school, or home, the use of drugs/substances in situations such as driving an automobile, having drug related legal problems or drug use resulting in recurrent social or interpersonal problems. This study emphasises on all drug/substance users and not only abusers, because it is the early prevention initiatives that may out-go abuse or prevent initiation into use; thus the study title.

Drug use and abuse may lead to **drug dependence** which is defined by World Health Organisation (WHO) 1986 as a situation whereby a person taking alcohol or drugs finds it very difficult or even impossible for him/her to stop taking the drug or alcohol without help, after having taken it regularly for some time. Dependence may be either **physical** or **psychological**, or both. Physical dependence symptoms include aching muscles, abdominal cramps, vomiting, diarrhoea, sweating, running nose, tears, and sleeplessness - these mainly occur in those who use opium regularly. In the case of psychological dependence, someone who has taken a drug regularly has a strong desire to continue using it. On stopping its use, the person becomes anxious, irritable, restless, and perhaps depressed (5).

Some of the drugs abused include alcohol, tobacco, catha edulis (khat), cannabis, amphetamines, opium, cocaine, heroin, glue, petrol, pethidine, and morphine. There are different ways of taking these drugs, including **eating, drinking, smoking, sniffing or nasal insufflation, as well as injection into the skin (subcutaneous), muscles (intramuscular), or veins (intravenous)**. The onset of drug action depends on the route of administration, being rapid by smoking, intravenous injection or nasal insufflation and slower by chewing, eating, or subcutaneous injection. Alcohol is generally ingested, khat is chewed and the juice swallowed, tobacco is smoked, sniffed or chewed and cannabis is usually smoked or ingested. All of these drugs have a psychoactive effect and are prone to be used by high school students. This study will mainly focus on **alcohol, tobacco, catha edulis (khat) and cannabis**, which are the most commonly used and easily available, among high school students in Nairobi. Most high school students are within the adolescent age group (10-19years) as defined by WHO (6). During adolescence, there's a transition from childhood to adulthood. The physiological and psychological changes that take place contribute to the high school student being vulnerable to drug abuse. Adolescence is typically characterised by exploratory behaviour, much of which is developmentally appropriate and socially adaptive for young people (7). Young adolescents are often said to be mainly cranky, rebellious, turbulent, self-indulgent, full of curiosity, energy, imagination, and emerging idealism. This leads them to high-risk behaviours such as cigarette smoking, drug use, early sexual experimentation, poor nutrition, anti-social activity, and hostility toward school (6, 7).

1.1 BACKGROUND

1.1.1 Cultural and Historical Aspects

Drug usage is influenced, modified, and determined by the cultural environment. For example the Jewish people learn to have a respect for alcohol from an early age and are educated to its use in the setting of religious observance. Similarly, the culture is common among the Lebanese (2). They treat alcohol with respect and deride drunkenness. In Islamic countries, alcohol is forbidden though under the influence of western culture a significant population of Muslims have drinking problems. In Italy alcohol problems are less common than in France because drunkenness is regarded unfavourable and alcohol is linked to meals, whereas in France people drink at any time of the night or day (2). Cultural influences surrounding a person can control drug use habits in a beneficial or non-beneficial way. Cannabis is the most widely used illicit drug, having the advantage of growing wild and being relatively cheap. It is taken by millions of people all over the world and is said to have the lengthiest history of use. In 2000, BC it was regarded as a sacred grass and from the fifteenth to seventeenth century Indian physicians regarded it as useful in the treatment of leprosy (2). In ancient Hindu medicine, cannabis was used as a sedative, to reduce appetite and to relieve constipation. It was also used for many disorders, ranging from asthma to rheumatic pains.

In pre-colonial days, drugs and alcohol were used and consumed as part of the cultural traditions of the community. The traditional rules and values of most African cultures strictly prescribed the circumstances under which drugs and intoxicants could be obtained. For example, alcohol was consumed on special occasions such as weddings,

Sexual identity

In many societies, boys and young men are expected to be more daring, risk-taking, and rule-breaking than girls and young women, hence it is argued the sex-relatedness of drinking problems and delinquency. In many countries the abuse of benzodiazepines is more prevalent among women than men. We may conclude that 'the male role' (masculinity) and 'the female role' (femininity) can influence drug taking behaviour.

Peer pressure

This has frequently been identified as the cause of initial drug use. Groups are identified with the use of psychoactive drugs as part of their life-style. Those with strong affiliate needs are particularly likely to be influenced by their friends in such groups into drug taking (12).

Self-medication

This mainly occurs with the use of sedatives and minor tranquillisers. Initially the use is through the doctor's prescription for a medical indication but later there may be abuse by self-medication without any indication.

Family disruption

Drug abuse has been attributed to family problems, particularly early separation from one or both parents (13,14,15). This is not a universal explanation on drug use because in a vice-versa manner, there are young people from broken families who are not involved in drug use and there are those from stable homes involved in drug use.

Predisposition

Evidence emerging from research on use of alcohol suggests that a genetic factor may be involved in some forms of drug use.

Availability

The ready availability of psychoactive substances, makes access of these substances easy to the youth.

Social and economic factors

Drug use may be induced by social pressures and changes. For example, poverty, migration, rapid socio-economic changes enhance drug use. Production of certain drugs may be deeply embedded in the economic life of a community such as cocaine production in certain countries in South America and opium production in certain Asian countries (11).

1.1.3 The Public Health and Social Implications of Drug Abuse

Drug abuse characteristically gives rise to two main problems:

- The interpersonal relationships of the user are adversely affected.
- The adverse social effects impinge on many individuals.

Social problems include; **Behaviour problems** may arise resulting in the user being unable to function normally. There could be economic losses that have an impact on the users immediate social circle (the family) that may be depended on him or her. The family relations also deteriorate (5,12) and problems in peer relationships occur (16). The association of **social problems** and chronic drug use among certain groups is very evident, and this correlation has been found to exist even among casual users of illicit drugs (17). Adolescents are continually expected to develop new skills and acquire new knowledge, both in school and in their social environment outside school. According to a WHO report 1981, laboratory experiments with animals have demonstrated that a variety

of psychoactive drugs impair the learning process and similar results have been found in human studies (18). The effects of acute administration of cannabis upon memory have been extensively investigated and have been found uniformly to result in impairment of memory (18). Similar effects on memory have been reported for diazepam. Since memory and other cognitive functioning are so essential to learning, it seems clear that frequent ingestion of drugs causes behavioural changes that may lead to poor academic performance, school absenteeism, school dropout.

Criminal behaviour has been noted among drug users in various forms. Beyond the illicit possession of drugs for their own consumption, they may be involved in crimes committed in order to ensure their own supplies, in addition to crimes of violence committed under the influence of drugs. The most misused and most dangerous substance involved in road traffic accidents is alcohol (18). Due to the impaired performance of the driver, he is more likely to end up causing an accident. The pharmacological effects of drug induced dis-inhibition result in impulsive actions like the criminal activities. Drug use is capable of producing psychotic reactions, which may lead to violence (19) or suicidal tendencies (6, 20).

Socio-economic effects -Drug use leads to demands on social services and medical resources, the cost of which is borne not only by drug users but also by the public (5,18). The effects include the societal responses such as prevention in form of rehabilitation and control programmes, the loss of resources already committed to education in the school drop-outs and intangible costs that are too difficult to assign monetary value. For example broken up families, poor child development, and deterioration of schools as learning institutions.

Drug users are **potential agents** in the spread of drug abuse in both their immediate social environment and in national and international settings. This is quite evident as indicated in one of the daily newspapers of Kenya (21), which reported '...perpetrators of the illicit drug trade were former students of the affected schools...?'

The perpetrators have been drug users even when they were students.

Health Problems

Drug abuse can lead to **hepatitis B, HIV/AIDS infection, and septicemia** from the use of non-sterile injection methods in the administration of drugs. Injection of drugs is rare in Africa as reported by International Institute for Prevention of Drug Abuse (IFLD 1997) (22). The acquiring of HIV/AIDS among drug users in Africa may not be so much because of injection administration but due to lack of presence of mind under the influence of drugs leading to unprotected sexual intercourse. Correlates of risk sexual activity have been found with substance use (23). **Physical disabilities** may result from road traffic accidents and other accidents occurring under the influence of drugs ingested. **Death** due to overdose and mixing of psychotropic drugs with other substances. Damage to tissues or organs e.g. **liver cirrhosis** caused by alcoholism, **lung disease** or **cardiovascular disease** from tobacco smoking. **Non-specific health disorders** resulting from neglect of personal hygiene and inadequate nutrition. **Mental disorders** such as psychosis caused by cannabis, which contributes to 12-40% of all psychosis in African hospitals (3).

1.1.4 The Kenyan Situation

Drugs are available in towns but the sources for cannabis are in Western, Nyanza Provinces and Malindi. There is also information that cannabis comes from the fringes of the forests in central Kenya and the Rift Valley (24). Traffickers and peddlers have sophisticated ways of transporting cannabis, as it is bulky and has a strong smell. It is usually transported in loads of fish or while green in bundles of vegetables from western Kenya to Nairobi and other towns. Tobacco, alcohol and khat are 'social drugs' that are easily available in most parts of the country. Khat is primarily obtained from Meru and Nyambene, and is distributed to other parts of Kenya. Heroin, cocaine, mandrax, solvents, amphetamines and other drugs are obtained from major towns and urban centres. Nairobi is a fast growing city and is a transit point for international and inter-regional travellers, making it highly prone to drug trafficking. Commercial production of alcohol is common in the city and traditional brewing takes places in the low-income areas of the city.

In Kenya drug trafficking and abuse is considered a criminal offence under the Narcotic Drugs and Psychotropic Substances Control Act of 1994 (25). The Kenya police through its anti-narcotic unit has its officers strategically deployed at entry and exit points. The police force is supposed to make sure the laws regarding this issue are enforced. The prisons imprison abusers and peddlers but there is no follow up after they serve their sentences. According to the prison's department the victims become habitual inmates and some even learn other vices from the prisons (8).

There are no drug abuse treatment centres in Kenya. Drug abusers are currently treated in the psychiatric units of provincial hospitals with other mental patients. Many alcoholic anonymous groups in the country offer mainly counselling services, however, clients who require medical treatment are referred to the psychiatric public hospitals or if they can afford to the only private mental hospital in the country, The Chiromo Medical Centre for appropriate treatment.

In the school curriculums of primary and secondary schools in Kenya the topic of drug abuse has been integrated in the Christian Religious Education subject for Standard eight, while for secondary schools it is in the Social Education and Ethics subject for Form two (26,27).

The Kenya government has established an inter-ministerial Drug Co-ordinating Committee bringing together eight ministries and three departments among them immigration and customs specifically to formulate a National Drug Control Policy and Strategy (24). Its role includes defining, harmonising, co-ordinating, monitoring and evaluating drug control measures in the country. The committee also seeks to improve the capacity and efficiency of law enforcement agencies and initiates public education and awareness programmes.

In addition, some informal groups are involved in drug abuse related matters. These include Non Governmental Organisations (NGOs), religious institutions, private sector and the community. The Kenya Drug Abuse Prevention Forum, which was formed in

March 1998 with the assistance of UNDCP, has a main responsibility of establishing a networking mechanism to strengthen partnerships among all these groups.

CHAPTER 2: LITERATURE REVIEW

Drug or substance abuse is deviant behaviour and most sociological theories seek to explain drug abuse behaviour based on theories of delinquency or criminal behaviour. The theory of the master status predicts that people who are seen as deviant in one respect come to be seen as deviant in other respects (28). If the society perceives drug abuse as deviant then the abusers are considered deviant. Becker et al (29) use the labelling theory to explain deviance; people come to be labelled deviant on the basis of how others interpret them and their actions. Some characteristics of a person become dominant such that he or she is perceived in terms of those characteristics. In other words, if a person is seen as having one deviant trait or characteristic, then he or she will be seen as having other deviant characteristics as well. People having only one or a few distinct deviant traits come to be seen as deviant in many respects, even those totally unrelated to their specific deviance. Drug abuse is widely perceived as being deviant.

The Magnitude of the Problem

All countries are affected by the devastating consequences of drug abuse (11,30,31). Rapidly changing social and economic circumstances, the global availability of illicit drugs, and the rising demand for them have all contributed to the increasing magnitude of this global problem. Drug abuse is neither confined only to marginalized groups nor is it in the western industrialised world. It is now a means of survival for underprivileged young people who are in contact with street life and crime. It also forms part of a youth subculture world-wide.

Based on estimates by the UNDCP 1998 (30), annual illicit drug consumption is likely to involve 3.3% to 4.1% of the world's population. Cannabis, the most widely abused drug is consumed by about 2.5% of the world population (about 140 million people).

Khat abuse in the form of khat chewing is reported from Yemen, Djibouti, Kenya, Ethiopia and the United Arab Emirates. The male population in all age groups and social classes are the main users of khat. Among secondary school students in Ethiopia, the prevalence of khat use was found to be 64.9% and this was associated with being a Muslim and male (32). WHO (33) estimates that one-third (1100 million people) of the global population aged 15 years and over are smokers of tobacco. The vast majority of the smokers being in developing countries.

According to a United Nation, General Assembly on substance abuse held in June 1998 (30) estimates of drug availability was reported. Cannabis was reported to have the most widespread illicit cultivation among the cultivated drugs (opium poppy and coca leaf). The global area where cannabis was cultivated and/or grew wild was about 1,800,000 hectares. Global production of marijuana and hashish was close to 500,000 tons per annum. The largest areas under wild growth were found in the countries of the former Soviet Union, notably Russia, Kazakhstan and other Central Asian countries. Morocco, Afghanistan and Pakistan were the major producers of hashish. Mexico, Colombia, Brazil and Jamaica were some of the large producers of marijuana. In Africa, marijuana production has become widespread in South Africa, Eastern and Western Africa. In Asia, producers include Thailand, Cambodia, Indonesia, the Philippines, India, Nepal and Sri Lanka. In industrialised countries like United States of America (USA), Australia,

Canada and a number of European countries, a significant amount of illicit cannabis is produced, in some cases using indoor cultivation.

According to a report on substance abuse in sub-saharan Africa by African Medical Research Foundation (AMREF 1998) (9), most drug addicts are young (12-25 years) and are residing in urban areas. A WHO report in 1998 (34) documented studies done on high school students in Ghana, Kenya and Zambia that indicated a prevalence of drinking alcohol which ranged from 70-80%. Similar such studies on the same population in Zimbabwe and Nigeria revealed use of alcohol, tobacco, inhalants, amphetamines and cannabis to be quite prevalent (35,36).

Mwaniki (37) reports from her study that, production and consumption of commercial and local brew is on the increase in Kenya. The investigator examined data on production and consumption of alcohol and tobacco in Kenya from the Central Bureau of Statistics (1977-1981), and concluded that more than enough alcohol was produced between 1979-1981 (an average of 300 litres of alcohol for every Kenyan man, woman and child). The study reported that the total number of officially sanctioned liquor outlets rose by 144% (from 1,110-2,709 outlets) between 1979-1981, but it failed to identify the users and abusers. A WHO report (38) summarises Kenya's consumption of beer for the periods 1960, 1973 and 1981 as 4.8 litres per capita, 10.0 litres per capita and 16.7 litres per capita respectively. This shows increased consumption over time. This data only accounts for the commercial beer and not the traditional beers brewed in the homes. So far, there's

These are used by many youth frequently and on a regular basis, compared to the illicit drugs. There is no known reported study in Kenya on Knowledge, Attitude and Practice on substance use among high school students.

Trends and Factors Associated with Drug Use

The widespread use of drugs among high school students may have been initiated while they are in primary school (11,30,36,42,43). This is a good indication to start prevention strategies as early as primary school level because the younger the age at which an individual first tries drugs, the more likely he or she is to try them again. Chen and Kendal give us a natural history of drug use from adolescence to adulthood (44). The history indicates that the major period of risk for initiation into the use of tobacco, alcohol and cannabis is mostly over by age 20 years. The risk period for initiating the use of illicit drugs lasts longer than for cigarettes and alcohol. Most drug use is both initiated and stopped before the late 20s. There appears to be a maturational trend for the use of drugs –the prevalence of high frequency use declines in adulthood for most substances except cigarettes. Use of prescribed psychotropic drugs is very common after the age of 28 years (44). The usage rate for these drugs is higher for women than men. For all drugs in general, however initiation rates are higher for men, while cessation rates are higher for women. An explanation to this kind of trend may be due to increasing age, the assumption of adult roles, especially family roles such as getting married or becoming a parent may be associated with greater conformity and a decreased motivation to use illicit drugs (44). Nevertheless most drug-related intervention programs, whether focused on prevention or on treatment must target adolescents and young adults in their early to mid-20s. By the time people are in the mid 30s, most drug use is a behaviour of the past.

In many studies carried out among high school students (41,42,45), it is observed that regular use of drugs is more in the males, and females use more of the licit psychotropic drugs. In the same studies regular use of alcohol and illicit drug use were associated with urbanisation but not socio-economic status. The females being less involved in alcohol and drug use may be due to the sex roles expected of the female. Yambo et al (41), Cronk et al (46) and Stevens et al (43) showed that rural students are at risk approximately equal to that of urban students but the rural are more involved in licit substances (alcohol and tobacco). Social factors that hinder the rural youth from drug use and abuse may have changed. Acuda et al (35) revealed that the problem was more acute in urban schools. All these studies imply that prevention measures should aim at all sexes both in the urban and rural areas keeping in mind the most likely drugs to be abused varies accordingly.

Many stimulants are used by students, mainly while studying for examinations; these include khat and amphetamines (3,42,47). Students believe that reading all night for examinations will improve their grades as gathered by Mwenesi 1994 (8) when one student said 'most of us take khat to remain awake. We all feel we are gaining more but it leaves one very tired, so then we take Roche 5 (diazepam) to be able to sleep'. Codeine based pain-killers and cough syrups that cause drowsiness are used as antidotes to khat. The misuse of 'medical drugs' among students may be quite prevalent (8,36).

Peer group influence whether informal or formal is important in becoming involved in drug use (15,28). Informal meetings are defined as groupings where adolescents meet generally for enjoyment or to engage in non-goal directed activities whereas formal meetings are

groupings in which participants meet generally at planned times to accomplish specific objectives. Drug use is more related to informal peer affiliations (48), while the formal groups facilitate adolescent decisions to avoid misuse of alcohol and drugs. In this study, peer groups which may influence alcohol and drug use positively or negatively among the high school students hope to be identified. Other factors associated with increased drug use among adolescents include having deficits in school performance, family relationships and health (12). The drug users are usually more delinquent, aggressive and violent (12,19). Often some are involved in driving after excessive drinking of alcohol and usually have problems with peer relationships (16). Risky sexual behaviour, suicide attempts (20,23) and disrupted families e.g. poor family bonds for good guidance or family violence (13,14,15) are associated with drug use. It has been observed that increasing frequencies of alcohol and cigarette use may be markers for more serious patterns of substance use among adolescents (49). Based on these findings, there could be a role that heavy alcohol and cigarette use play in patterns of concurrent substance use among adolescents. Prevention strategies should come in early when the youth are being initiated into alcohol and cigarette use.

Attitudes towards Drug Use

Multiple drug use is common among youth that use cannabis (50) and the same youth have different attitudes towards drug use from those who don't use cannabis. G.Sylbing et al (50) showed that 81% of cannabis users and 24% of non-users believed that occasional cannabis use would have no harmful effects, while 10% of cannabis users and 35% of non users believed that all regular cannabis users would become psychologically weak. Another study (51) found that heavy smokers underestimate their risk of premature mortality. There is a possibility that drug users misunderstand the consequences of drug abuse, they then should

be informed to help them make good healthy decisions. The attitudes of users and non-users are very important in designing drug abuse prevention programmes. This study hopes to identify these attitudes. Attitudes and correlates of smoking in preadolescents were studied (52). It was found that children who tried cigarettes had more adverse (poor) attitudes and beliefs compared to non-smokers. Those who smoked were more likely to have friends, parents or siblings who smoked. Availability of cigarettes in the home was also greater among those who ever smoked. These findings imply that prevention programmes should begin early enough and focus on family and peer influences as well as attitudes. Children's perceptions of advertisements for cigarettes have been studied (34,53). It was found that younger children of ages 6-10 years were very much tied to what was specifically shown in the advertisements, while the older children tended to perceive more complex ideas such as feminine, sociable, trendy, sporty qualities that younger teenagers find attractive. This developmental trend affects changes in behaviour and attitudes with respect to smoking – smoking prevalence rates increase and judgement of the morality of smoking and drinking decreases in severity over the years. In the designing of effective health education programmes, a sound knowledge of children's perceptions of advertisements is an important prerequisite.

Prevention

Substance abuse affects children, young people as well as adults in both developing and industrialised countries. This constitutes a threat to the health of the population and damages the economic and even political stability of nations. The issue of how best to combat substance abuse and illicit trafficking of these drugs has therefore come to occupy a central position in many international forums (47), some of which include;

- The Single Convention on Narcotic Drugs 1961, which unified earlier treaties on narcotic drugs.
- The Convention on Psychotropic Substances 1971.
- The United Nations Convention Against the illicit Trafficking of Drugs and Psychotropic Substances, 1988.
- The International Youth Meeting for Drug Free 21st Century, 1998.

Many governments aim at (54)

- reducing supplies.
- Making law enforcement effective.
- Instituting and maintaining effective deterrents and tight domestic controls.
- Developing prevention.
- Establishing effective treatment and rehabilitation for victims.

While most international effort is currently devoted to controlling the supply of illicit drugs, any long-term solution must address the need to reduce demand (11). For any programme to be complete it should have demand reduction, prevention, treatment, and rehabilitation as part of its package. Demand reduction is complementary to supply reduction. If the supply of these substances of abuse is reduced but the demand is not tackled, people are likely to look for these substances or seek ways of getting them (54).

Hamburg (6) and WHO (34) recommend that demand reduction programmes should be included in all educational and youth orientated institutions to help provide the building blocks of adolescent development. Hamburg (6) says a school should help a student to learn how to think healthy, to learn healthy lifestyles and to learn to be active citizens. He also recommends that schools and communities should be linked in educating young adolescents

and that the study of the effects of alcohol and illicit drugs on the brain and other organs should be an integral part of education.

In South Africa alcohol consumption is a growing problem with an adult per capita consumption of about ten litres in 1996, putting the country among the highest alcohol consuming nations in the world (55). A ten-point alcohol action plan has been proposed that aims at decreasing the per capita consumption of alcohol on the one hand and reducing high-risk behaviours associated with drinking. This includes increased taxes on alcohol, enforcing legislation on the minimum drinking age, implementing strict strategies for licensing liquor outlets and health education for high-risk groups and the broader community.

In Mexico, a National Policy on alcohol and alcohol-related problems was set in 1979 (56).

It emphasised that liquor outlets should not be located close to schools, work places, sports facilities or places where young people gather. People less than 18 years were not to be served or employed in bars, night-clubs or where traditional alcohol was being served.

Restrictions were placed on the content of advertising. The policy did not give any consistent educational programme for schools with regard to alcohol and its effects, also there was no legislation regarding drunken drivers, and the accidents caused by them.

The increase of taxes on cigarettes in the USA between 1955-1994 was associated with declines in consumption of tobacco (57). This followed the inflation and the increased health concerns among the people. In Finland, it was found that the price was the single most important determinant of demand for tobacco products (58). Between 1981-1989

consumption of tobacco in Canada was noted to have fallen from a higher level and at a faster rate compared with USA (59). These findings could be attributed to higher taxation practices, vigorous legislation and the leadership role adopted by the Canadian government in the 1980s. This gives evidence of what combined factors can do to promote prevention and control. The logic of tobacco taxes is taken directly from economic theory which says a rise in tax rate increases the cost of cigarettes, the law of supply and demand suggests fewer cigarettes will be consumed if taxes are raised. Most studies show price elasticity for demand for cigarettes of 0.4-0.7 and more among adolescents and light smokers. That is 10% price rise lowers consumption by 4-7% and by as much as 14% among teenagers, whose income is limited (58). However, the tobacco economy is a growing sector in the less industrialised nations. Cigarette consumption is generally increasing; the world market share of their cheap tobacco leaf is increasing. For example, Zimbabwe and Brazil are some of the nations attempting to repair their foreign trade benefits through tobacco trade (60). Tobacco control has not been particularly successful especially among the children, who annually since the early 1990s have their smoking prevalence on the rise (61). A ban on television advertising of cigarettes in the USA (1971) resulted in manufacturers using other means of promotion especially through the print media, which is still attractive to the youth (60). Tobacco companies continue to report extremely enviable levels of profits. All these issues bring in the question as to what is the most sustainable strategy to control tobacco use.

Control of narcotic drugs has been very much in the national drug policies of various countries. In the USA there was a common slogan 'drug free America' in the mid-1980s and the USA national drug policy goals aimed at reduction of illicit drugs at all levels;

experimental first use, 'casual' use, regular use and addiction use (62). This policy did not include alcohol and tobacco in its programme, yet the public should also be reminded that the use of these legal substances has some potential health risks and is highly correlated to the use of illicit drugs. The policy also aimed at encouraging prosecutors and courts to seek means of using arrest as a way of pushing victims to abstinence (secondary prevention). The Miami Drug Court represents such an innovation. This forms a complete control programme and hopefully reduces prevalence of the drug victims.

In Malaysia, a national association against drug abuse was set up in 1976 with the purpose of educating the public about drug problems (63). About the same time, The Dangerous Drug Act was passed and it legalised for the first rehabilitation of drug dependants. Rehabilitates are received at centres via courts and are kept for a minimum of six months. This is another form of a comprehensive control programme.

CHAPTER 3: STATEMENT OF RESEARCH PROBLEM

3.1 RESEARCH PROBLEM

Drug use is presently recognised as a major problem among youth. It is estimated that at least 70 – 80% of high school students are involved in alcohol drinking (34). One of the major factors contributing to this phenomenon is the easy availability of alcohol and drugs in the community. This is compounded by the fact that in Kenya, although there are laws that restrict access of the legal drugs by age, many commercial outlets do not observe them; hence, these drugs are easily and abundantly available. For the illicit drugs, the traffickers know how to get to their consumers and vice versa.

Apart from these substances being available, advertisement of alcohol and tobacco is not restricted in the electronic or print media and this may play a major role in encouraging use. Advertisement may greatly influence the perceptions of youth, who associate with images of being more successful, sporty or trendy.

The enforcement of the law as concerns alcohol and drugs mainly focuses on the illicit drugs; more so on the control of supply but does not address demand. The drug problem is considered a criminal activity so that the law enforcers punish the victim who may be the supplier or the consumer, by subjecting fines and imprisonment. There is no rehabilitation or follow-up of the victims after imprisonment. This does not reduce the prevalence of the problem and thus supply and demand of drugs continues.

Adequate health education to youth lacks in schools and the community. The high school student who has poor knowledge or is ignorant of drug abuse may be more likely to get involved in this activity. Furthermore, whereas this topic is partly taught in schools, there is no collaboration of schools with the community (family, medical personnel, NGOs, churches, etc.) in trying to solve the problem such that the problem is dealt with in a piecemeal manner.

RESEARCH QUESTION

What are the factors that facilitate substance use among high school students?

3.2 JUSTIFICATION

Kenya like many other developing nations has only limited resources to cover the basic needs of its people. Abuse of drugs not only drains the economy because control of supply and demand reduction is an expensive undertaking, but is also a setback to the country, as the youth become less productive. The overall picture of the problem shows an upward trend as indicated by the seizure statistics, the media reports about drug abusers, traffickers and highlights of seizures.

Most studies done on the youth in Kenya have been limited only applying a quantitative methodology. This limits the interpretation of the findings. Collection of more data on the nature and trend of the problem in both a qualitative and quantitative manner was done in this study to achieve a more complete picture of the problem among the high school students. This information will be useful to the curriculum developers, school teachers, counsellors and specialists of drug abuse prevention for the planning of successful interventions on demand reduction. This is in line with the objectives of the International Youth Meeting for

Drug Free 21st Century held in February 1998 in Paris. The objectives aim at demand reduction through prevention at all primary, secondary and tertiary levels.

3.3 OBJECTIVES

3.3.1 BROAD OBJECTIVE

The broad objective of the study is to determine the knowledge, attitude and practice of substance use and the correlates of use among high school students in Nairobi.

3.3.2 SPECIFIC OBJECTIVES

The specific objectives of the study are:

- (1) to determine the prevalence of substance use among high school youth;
- (2) to assess the level of knowledge on substance use and the consequences of use;
- (3) to assess attitude towards substance use among high school students;
- (4) to determine factors related to substance use among high school students.

3.4 HYPOTHESIS

The hypotheses of the study are:

- (1) poor knowledge on substance use and their consequences is not related to substance use;
- (2) poor attitude on substance use is not associated with substance use;
- (3) higher prevalence of substance use is not associated with students in day schools compared to those in boarding schools.

CHAPTER 4: METHODOLOGY AND MATERIALS

4.1 Study Design

This is a descriptive cross-sectional study carried out among high school students in Nairobi Province.

4.2 Variables.

Dependent Variables –these were variables related to practice about substance use and abuse.

Independent variables -these were variables related to knowledge, attitude and demographic characteristics e.g. age, class, religion, sex, day school, boarding school, hobbies/clubs.

Definitions of some of these variables are as follows:

- 1) **Knowledge** – This was grouped into psychological, biological or social effects of the drugs. Above these groupings, there was miscellaneous information not falling into any of the groups.

Biological effects were defined as any physical harm on the body, be it internal or external e.g. liver damage or gastritis from alcoholism, lung cancer from tobacco smoking or physical damage of the body acquired under the influence of the psychoactive substance.

Psychological effects were symptoms affecting the mind e.g. euphoria, addiction or hallucinations.

Social effects were mainly activities that affect others in the immediate or wider social environment of the drug user e.g. criminal activities done under the influence of the drug or done so as to obtain the drug, the user being unable to fulfil his/her major role obligations at work, school or home.

Miscellaneous responses included information on availability, users, contents, brands of the drugs or any information not falling into the above groupings.

Knowledge was graded by the aspects of the effects of the drugs; the respondents filled in the questionnaire i.e.;

Good Knowledge - responses including more than one grouping of the drug effects for example all the effects on alcohol being mentioned – biological, social and psychological or any two of the groupings being mentioned.

Fair Knowledge – Any responses with only contents of one grouping.

Poor Knowledge – Any responses not falling in any of the groupings.

2) **Attitude** – this was mainly based on approval/disapproval on use of these drugs. Grading was as follows;

Poor attitude- those who approved use of these drugs.

Fair attitude – those who disapproved use of these drugs but not strongly.

Good Attitude – those who strongly disapproved use of these drugs.

3) **Hobbies/clubs** – these were activities students do in their free time out of class or school. The activities were divided into informal and formal. The informal activities were mainly ad hoc peer associations, where participants assemble generally for fun or to engage in non-goal directed activities for example discos, parties, driving around in cars and dating. While the formal activities included groups that meet, generally at planned times to accomplish specified objectives for example all academic clubs: Science, Geography, sporting activities, religious clubs and scouting. The study was interested in the respondents who were either in

informal activities only or in the formal activities alone. These were grouped based on these definitions.

4.3 Study Area.

The study was carried out in Nairobi Province, which is a centre of communication, administration and commerce. Nairobi covers at least an area of about 690 km² (1993) (64).

It has a population of about two million, with a growth rate of 4.5 % (1993) (64). It is divided into the following administrative regions – Makadara, Langata, Kasarani, Dagoretti, Embakasi, Westlands, Starehe, and Kamukunji. Most (50%) of the population stays in the informal settlement areas, mainly the slums.

Reasons for choice of study area

The availability of drugs in Nairobi is evident as demonstrated by the seizures made by the Kenya Police Antinarcotic Unit. At the international airport, from vehicles destined to Nairobi and the arrests of culprits all indicate that Nairobi is a transit point. Nairobi is rapidly going through the phase of urbanisation and development, and accompanying this is social instability in many forms; principally unemployment, overcrowding, family break-ups, loneliness, lack of parental guidance and crime. This type of environment is conducive to drug use by many especially the youth. The student who attends day school is everyday exposed to drug use, compared to boarders. This might affect their health and socialisation process.

Nairobi has forty-five public high schools and about fifty-two private schools. These schools are either boarding or day, the latter being more. There are also single sex or mixed (boys and girls) schools. *The majority of boarding schools are for girls.* Among the public schools, there are five national schools and the rest are provincial schools. The estimated number of

high-school students in Nairobi is about 24,000. This estimate is based on the number that sat for the Kenya Certificate of Secondary Education in 1998 which was 6,000 form 4s with a male: female ratio as about 3: 2 (65).

4.4 Study Population.

The target population was high school students of Nairobi Province for the quantitative and qualitative components of the study. In addition, head-teachers of schools were also interviewed, as key informants.

4.5 Sampling

4.5.1 Selection of study subjects

Three divisions of Nairobi Province were selected purposely because they happened to have all the types of schools and the majority of the schools were in these divisions. The divisions are Dagoretti, Starehe and Westlands.

A high school student was the sampling unit for the study. Multi-stage sampling method was applied in the selection of the study subjects (66). Selection was as follows;

- (1) Schools in the divisions were first stratified into private and public schools.
- (2) This was followed by stratification into day schools and boarding schools.
- (3) Stratification was done further according to type of school in terms of sex (mixed, boys alone and girls alone), before random selection of the required number from each stratum was done.
- (4) At the school level, the study subjects were first stratified according to class; form 1, 2, 3, 4, then the required number was randomly selected from each stratum.

Eleven schools participated in the quantitative survey. These schools were composed of 2 Boys Boarding (BB), 3 Boys Day (BD), 2 Girls Day (GD), 1 Girls Boarding (GB), 1 Mixed Boarding (MB) and 2 Mixed Day (MD).

The focus group discussants were randomly selected from an appropriate sampling frame; the list of the schools in Nairobi. The discussions were only in the schools where the questionnaire was not administered. Six focus group discussions were conducted and they included all the types of schools by gender i.e. 1GB, 2BD, 1BB, 1MD, 1GD. The discussions were strengthened by 3 in-depth interviews with 2 school- teachers and one counsellor working with an organisation that deals with campaigns against drug use among high school students.

Inclusion Criteria of Study Subjects

Criteria for the selection of the study subjects was-

- Being a high school student within the study area.
- Consenting to participate in the study.

Exclusion Criteria of Study Subjects

The following criteria was used to exclude certain high school students from the study –

- A student who did not consent to be included in the study.

4.5.2 Sample Size

The formula below was used to calculate the minimum sample size of high school students for the study (66).

$$n = \frac{Z^2 p (1-p)}{d^2}$$

Where n = minimum sample size.

p = hypothesised proportion of students using drugs.

Of the studies conducted in Kenya on high school students, analysis on the prevalence of alcohol and drug use is by type of drug. A 1983 study (41) indicated that 50% of students drank alcohol, 40% smoked tobacco, 25% chewed khat and 10% used cannabis. The prevalence of drug use varies greatly with type of drug, in this view the highest prevalence of 50% for alcohol use was taken as the hypothesised figure to give the minimum sample size.

Z = Table value from the standard normal distribution at 5% significance level (1.96).

d = degree of precision (5%)

With 95% confidence interval and assuming that 50% of high school students were drug users, at least 384 students were the minimum to be selected for the study. Keeping in mind the anticipated non-response, a much higher sample size than the minimum calculated was expected. A total of 481 students participated in the quantitative survey.

4.6 Ethical Considerations ✓

Clearance to carry out the study was obtained from the office of the President. Approval was sought from the Ministry of Education and the Provincial Education office Nairobi. The objectives of the study were clearly explained to the heads of schools, who in turn explained *the same to the respective teachers and students. Informed verbal consent was sought from*

the students before they could fill in the questionnaire and they were assured of the confidentiality of their responses. Any students who needed any help as concerning drug use and abuse were advised accordingly by responding to their concerns and giving information as to where victims could get help. As much as possible, disruption of the day-to-day running of the schools was avoided.

4.7 Data Collection : Methods and Tools

Data was collected from 13th May 1999 to 24th June 1999. The selected students were issued with a standard self-administered questionnaire written in English language (Appendix I). The designed questionnaire with 62 questions was pretested with 20 students from Kamukunji division and the necessary changes after pre-test were made before using it in the actual data collection. Students answered the anonymous questionnaire in one of the classrooms offered by the school. The investigator explained to the students the purpose of the survey and strongly emphasised the anonymous nature of the questionnaire. As the questionnaire was filled, the investigator remained in the room throughout to ensure individual responses. Focus Group Discussions and In-depth Interviews were facilitated by following prepared guidelines (Appendices II & III). These were moderated by the investigator, while a research assistant recorded the discussion.

4.8 Minimising Biases and Errors

During the selection of study subjects, bias and errors was minimised by random selection of the subjects from their respective strata. In preparation for data collection, training of the research assistant on the study objectives and methodology was carried out. A standard questionnaire, written in English was used on all respondents. The questionnaire was pre-tested first before being used in the field.

4.9 Data processing and Analysis

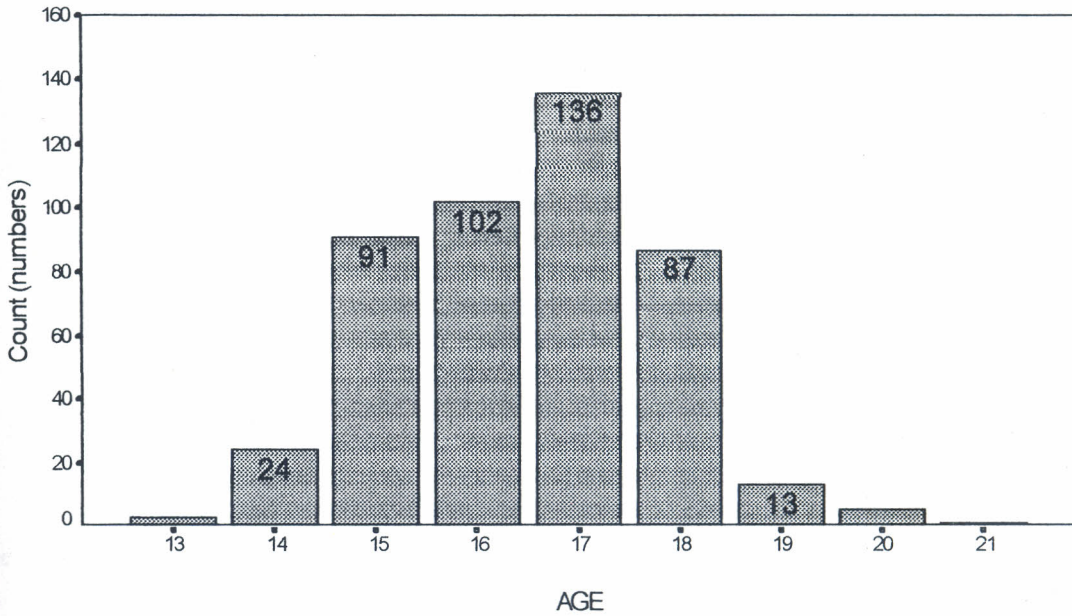
The collected data was edited first before being entered into the computer. Analysis was done using the Statistical Package for Social Sciences on personal computer (SPSS –PC) package. Descriptive statistics were determined during analysis. Appropriate statistical tests of significance, namely chi square test (χ^2) and logistic regression were applied to identify factors that are related to practice towards drug use and abuse. Data collected from focus group discussions and in-depth interviews was first transcribed before being synthesised and categorised into relevant themes.

CHAPTER 5: RESULTS

5.1 Sociodemographic Characteristics

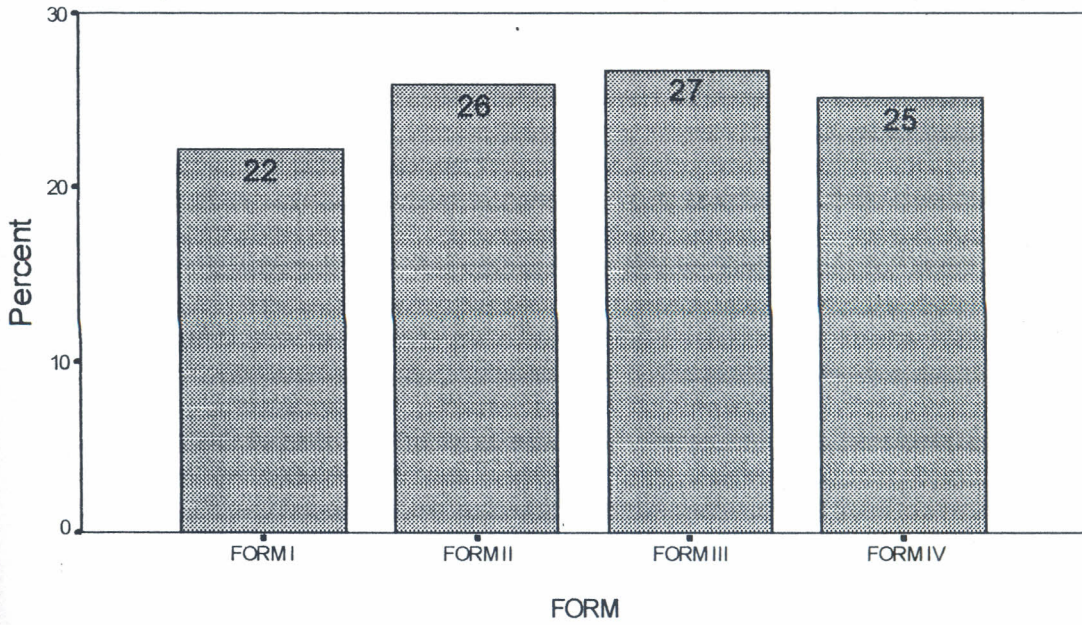
A total of 481 students participated in the study. Of this 301 (62.7%) were males and 179 (37.3%) were females.

Figure 1 Distribution of Students by Age (n=481)



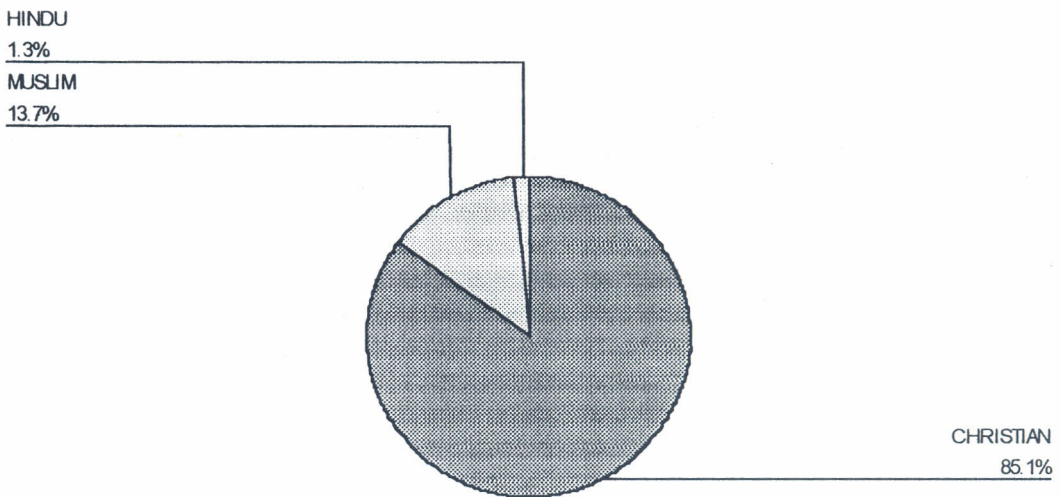
The respondents age ranged from 13 – 21 years (Figure 1), with a mean age of 16.49 and a standard deviation of 1.33. Age range in high schools of Kenya is usually between 14 – 18 years with a few extremes on the lower and upper ends of the range. This distribution was normal.

Figure 2 Distribution of Students by level of Class (n=481)



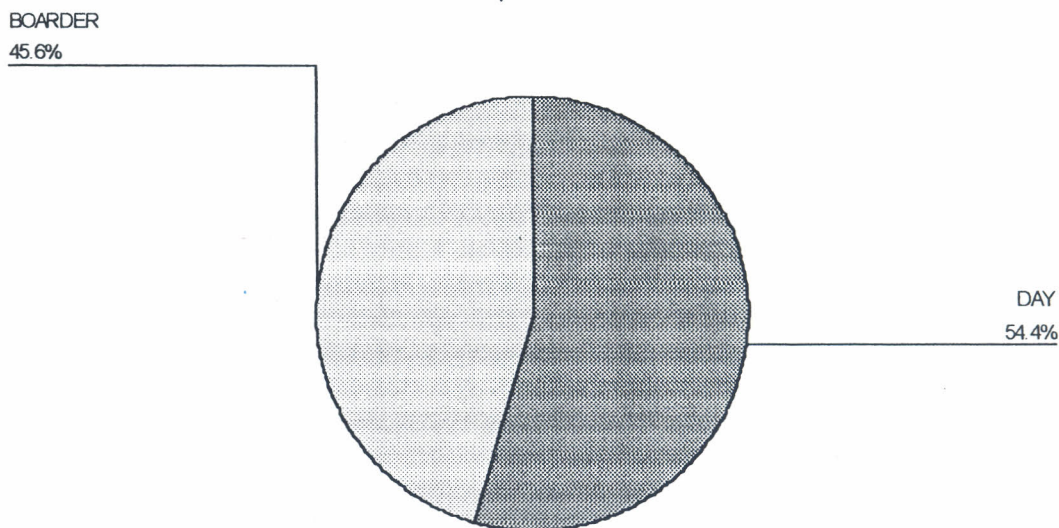
The class distribution of the students was as follows 22%, 26%, 27% and 25% respectively for forms 1, 2, 3 and 4 (Figure 2). This gave a good representation of all the classes.

Figure 3 Distribution of Students by Religion (n=476)



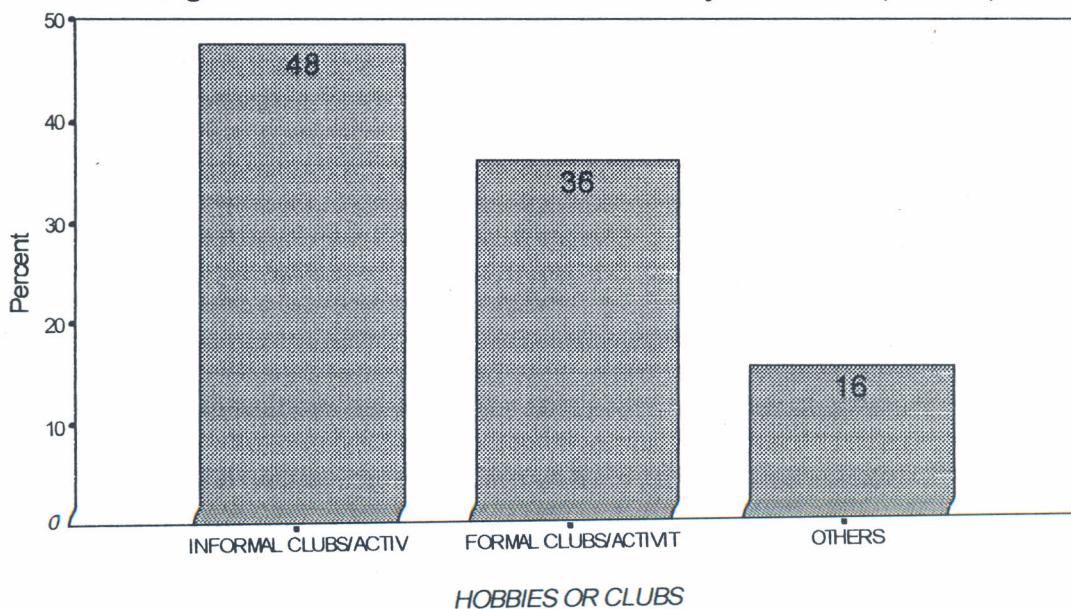
Most of the respondents were Christian 85% (Figure 3). This was expected, as Kenya is predominantly a Christian country.

Figure 4 Percentage of Day Scholar/Boarder (n=472)



Day Scholars were 54.4% of the respondents (Figure 4) and most lived with their parents (90%). A higher percentage (80%) of schools in Nairobi are day schools.

Figure 5 Distribution of Students by Activities (n=474)

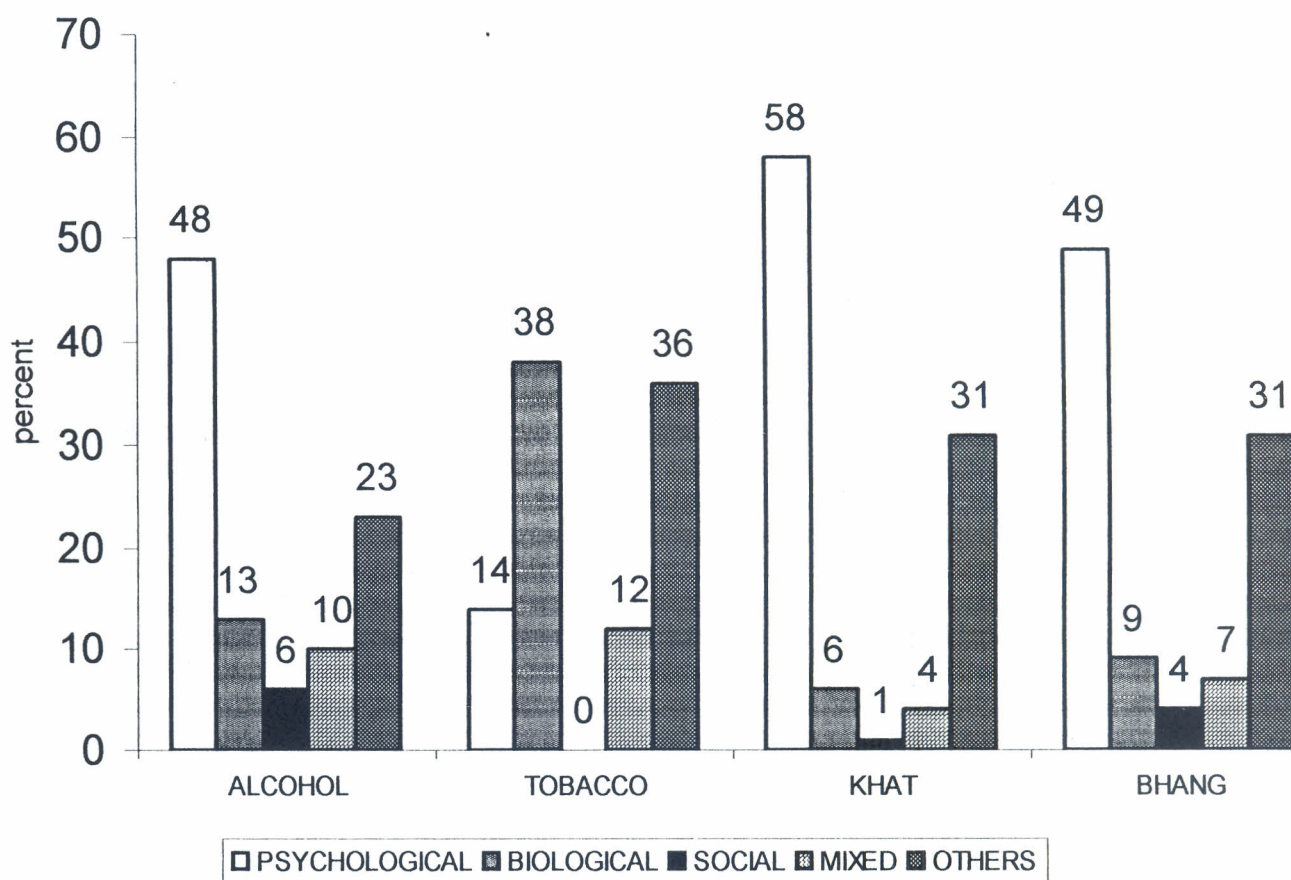


Most of the students (48%) were involved in informal activities such as watching movies, dating, going to night clubs as their hobbies (Figure 5). Probably the students in Nairobi have more access to informal activities.

5.2 Knowledge on Drugs

One of the main objectives of this study was to assess the knowledge the students had on the four drugs studied. Alcohol, tobacco, khat and bhang were known as drugs by the students in the following percentages respectively 86.5%, 75.4%, 80% and 78.8%. When the respondents were asked what knowledge they had about the drugs, various responses were given. These included responses such as ' Bhang gives one courage to do what they cannot do without it', ' Alcohol makes one feel 'high', ' Alcohol is available in many shops, it is in liquid form and may be beer, whisky, wine or local brew', ' Miraa keeps one awake' ' Bhang leads to madness', ' Bhang causes one to do crimes and to be rebellious', ' Bhang is illegal', ' Smoking tobacco may lead to lung cancer', ' Smoking causes bad breath'. These were grouped into psychological, biological and social effects. Forty-eight percent of the students knew about the psychological effects of alcohol alone, while the majority (38%) knew about the biological effects of tobacco. Fifty-eight percent and 49% mainly knew about the psychological effects of khat and bhang respectively (Figure 6).

Figure 6 Knowledge on Drugs



Generally, more students knew about the psychological effects of all the drugs except for tobacco which was known for its biological effects. When the respondents were asked about the various ways of drug intake, drinking was considered by 83%, eating by 65%, injection by 30%, sniffing by 46% and smoking by 83%.

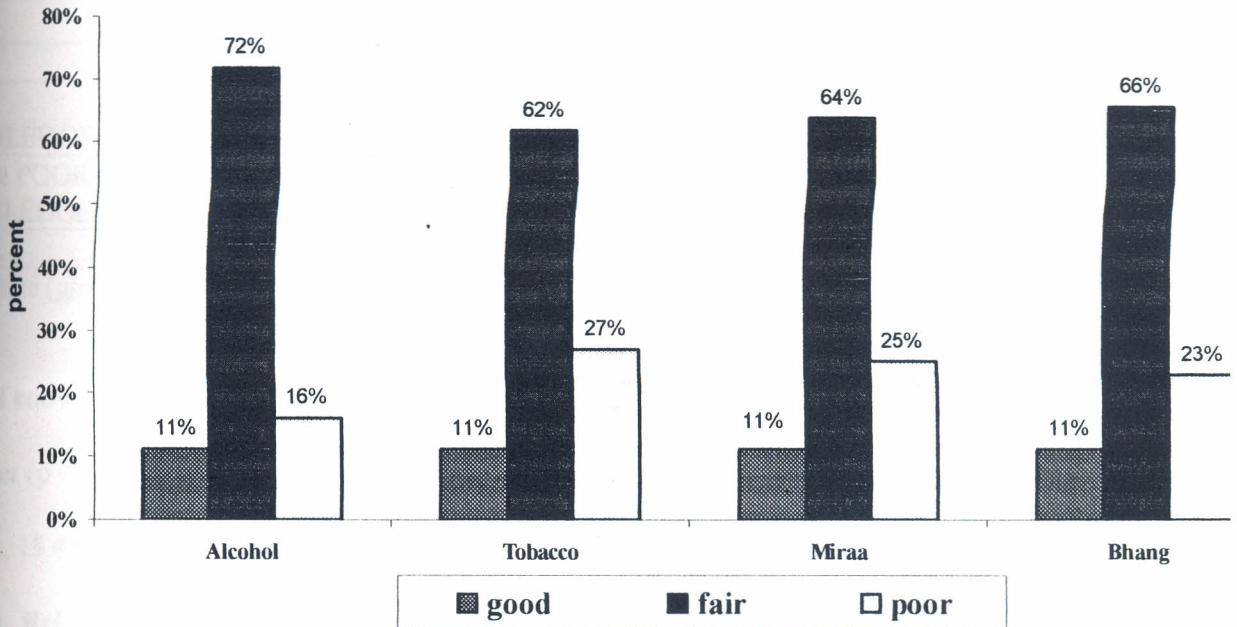
In relation to the above findings, it emerged from all the FGDs that the major drugs abused were alcohol, bhang, tobacco and miraa; though miraa was not considered a drug by two

groups (2 boys' schools). One of the participants in these groups said '...really what bad effect does miraa have on somebody...none at all...'. This ties with the general view that miraa is not a drug because it has no bad consequences. Alcohol was known by the following names 'booze', 'fermented porridge' (local brew), 'hot stuff' (spirits), while cigarettes were mainly known as 'fegi', miraa was known as 'grass' and bhang was named 'weed', 'boza' or 'ganja'. The use of these names among the students is a way of communication and at the same time concealing from those who should not understand what they are talking about.

There were other rare drugs mentioned in the discussions, including hard drugs like heroine and cocaine mentioned by the boys' schools and the prescribed drugs such as piriton, panadol and cough syrups mentioned by one girls' boarding (GB) school. One of the schools in Eastleigh felt that all the common and rare drugs were commonly being abused.

Use of the four drugs studied usually has an effect on the user, as was stated by 96% of the respondents. The knowledge on the effects of these drugs was graded into good, fair and poor. The majority of the students had fair knowledge on the effects of these drugs. Fair knowledge on the various drugs was as follows 72.4% for alcohol, 62.4% for tobacco, 63.7% for miraa and 65.9% for bhang (Figure 7).

Figure 7. Level of Knowledge on the effects of drugs



Factors influencing the level of knowledge on the effects of the drugs

Table 1. Relationship between sex and level of knowledge on the effect of tobacco

	MALE	FEMALE	TOTAL
GOOD KNOWLEDGE	19 (7.5%)	22 (17.6%)	41 (10.8%)
FAIR & POOR KNOWLEDGE	236 (92.5%)	103 (82.4%)	339 (89.2%)
TOTAL	255 (100%)	125 (100%)	380 (100%)

Chi-Square (global) = 8.9763 df = 1 p = 0.0027

The level of knowledge on the effects of tobacco was found to be statistically related to sex ($p = 0.002$). The females were more likely to have good knowledge on the tobacco effects than the boys 17.6% compared to 7.5% (Table 1). Sex did not influence the level of knowledge on the effects of the other drugs ($p > 0.05$).

Table 2. Relationship between the level of Knowledge on the effects of miraa and being a Day Scholar/ Boarder

	DAY	BOARDER	TOTAL
GOOD KNOWLEDGE	15 (7.4%)	28 (15.4%)	43 (11.1%)
FAIR & POOR KNOWLEDGE	189 (92.6%)	154 (84.6%)	343 (88.9%)
TOTAL	204 (100%)	182 (100%)	386 (100%)

Chi-Square (global) = 6.2681 df = 1 p = 0.0122

Level of knowledge on the effects of miraa was statistically related to being a day scholar or a boarder ($p = 0.012$). The boarders were more likely to have good knowledge than the day scholars, 15.4% compared to 7.4% (Table 2).

Table 3. Relationship between the level of knowledge on the effects of tobacco and being Day Scholar/ Boarder.

	DAY	BOARDER	TOTAL
GOOD KNOWLEDGE	24 (12.5%)	17 (9.3%)	41 (11%)
FAIR KNOWLEDGE	129 (67.2%)	105 (57.7%)	234 (62.4%)
POOR KNOWLEDGE	39 (20.3%)	60 (33%)	99 (26.5%)
TOTAL	192 (100%)	182 (100%)	374 (100%)

Chi-Square (global) = 7.849 df = 2 p = 0.020

Level of knowledge on the effects of tobacco was also statistically related to being a boarder or day scholar ($p = 0.020$). The day scholars were more likely to have good and fair knowledge than the boarders, 79.7% compared to 67% (Table 3).

Table 4. Relationship between the level of knowledge on the effects of miraa and hobbies/ clubs

	INFORMAL	FORMAL	OTHERS	TOTAL
GOOD KNOWLEDGE	20 (11.3%)	10 (6.9%)	11 (17.7%)	41 (10.7%)
FAIR KNOWLEDGE	105 (59.3%)	99 (68.3%)	42 (67.7%)	246 (64.1%)
POOR KNOWLEDGE	52 (29.4%)	36 (24.8%)	9 (14.5%)	97 (25.3%)
TOTAL	177 (100%)	145 (100%)	62 (100%)	384 (100%)

Chi-Square (global) = 10.090

df = 4

p = 0.039

The relationship between level of knowledge on the effects of miraa and hobbies/clubs was statistically significant ($p=0.039$). The students in the group known as other i.e. both in informal and formal were more likely to have good knowledge compared to the other students, 17.7% compared to 6.9% (formal) and 11.3% (informal) Table 4.

The relationship between hobbies/clubs and the level of knowledge on the effects of the other drugs did not have any statistical significant relationship ($p > 0.05$).

Many consequences of drug use were discussed in the FGDs. All the groups were aware of the psychological effects of bhang. They mentioned 'It makes you feel 'high' and forget about your problems'. Another participant said 'It gives one more courage to do anything-you are on top of the world'.

Addiction was commonly mentioned as an effect of bhang or tobacco by the boys' schools. Most of the discussants commonly associated tobacco with lung cancer, while bhang was associated with mental illness. Half of the discussants associated khat with tooth decay and gastritis. In one FGD from Eastlands the participants strongly associated poor academic performance with the chronic users of the four drugs. Social problems were commonly associated with the drugs. Most of the sentiments about this were given by the boys. One

said ' Most steal money from their parents or other students, others sell items from their homes in order to survive, because you know they can not do without these things'. In the same breath, another said ' Some come to school unkempt with red eyes, have hangovers and are sometimes hostile'. This was further related to their interaction with school authorities to the extent that they had to be disciplined, as one participant said ' Others have been expelled or suspended when caught by school authorities'.

There are various help seeking venues or people that could assist students who have drug related problems. Ninety five percent of the respondents knew that students with drug related problems could get help. Seventy percent suggested help from school, 68.5% from parents, 65% from hospitals, 66% from religious leaders and 44% suggested others, which included from fellow students, audio/video teaching aids.

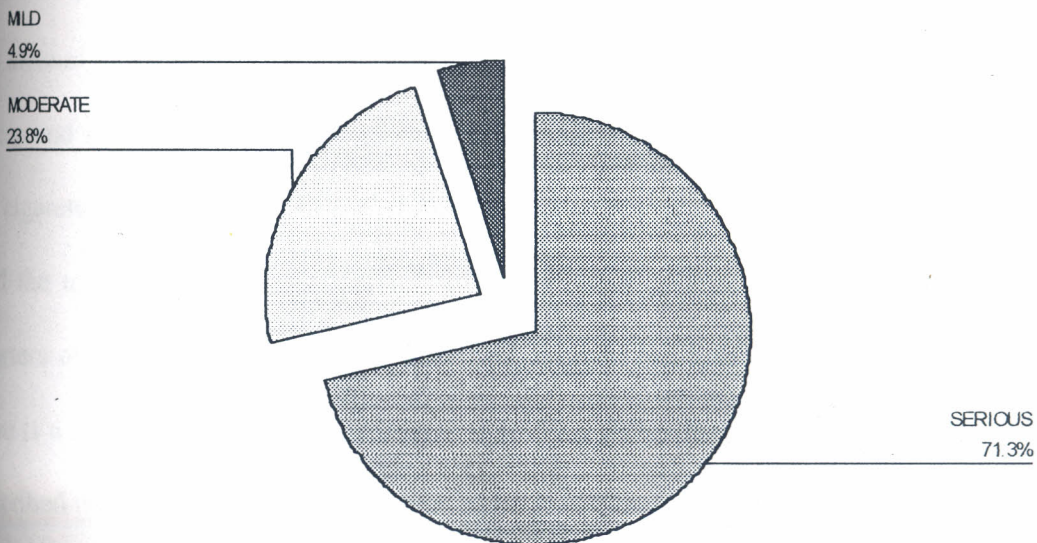
When the discussants in the FGDs were asked where victims could get help, **peer counselling** from fellow students was considered as one of the best ways for victims to get help. **Religion** was also highly accepted as a form of help and one group felt that individual teachers were of great help. Other options were not fully accepted for various reasons. For example, most discussants felt that the **Counselling Departments of schools** were not handling the drug cases with confidentiality, thus most of the students had lost confidence in this department. One participant said ' The whole staff room discusses you, so that even in class you are uneasy'. The students felt that their **Parents** had no time for them as most had this sentiment ' Our parents have no time to talk to us, they are only concerned with academic affairs'. Most participants said that getting access to the actual helper in the

hospital takes a very long process and sometimes when you get to the doctor, he/she may not have enough time with the victim. To get to the **Psychiatrists/Psychologists**, most groups said that affordability and accessibility was an obstacle to get to these specialists, as one of the participants asked 'Where do you find these specialities?' These findings reveal that though there are intervention areas for the drug related problems there is inadequate accessibility to the students.

5.3 ATTITUDE TOWARDS DRUG USE

Attitude has a powerful influence over behaviour. This study assessed attitude of students towards the use of drugs. It was found that 99% of the respondents felt that drug use is a problem among high school students.

Figure 8. How Serious is The Problem? (n=470)



Seventy one percent of those who responded as to how serious the problem was, felt it was serious, 24% moderate and 5% a mild problem (Figure 8).

All the FGDs considered drug use as a serious problem among the high school students.

Some of the reasons given as to why the situation was serious were:

That the problem is serious to the extent that all high school student parties must have alcohol or else they are considered not to be parties. Most discussants agreed with this view and felt that there is nothing wrong in drinking alcohol. This indicates that there was no consciousness of the bad effects of alcohol among the majority of the students. Most participants when asked how many students they knew who are involved in any form of substance use, the responses varied, but in general the higher class participants on average knew at least 15 students involved in drug use, this was more evident among the boys' schools. It was evident that availability, affordability and access to use of the common drugs was not a problem to the students as observed when one girl participant said 'It's so easy to get alcohol or cigarettes from the shops. There are mini- packs for the spirits, which are so cheap and still very effective, and these can be taken at home, school or anywhere else. As for cigarettes, these can be 'faged' in the toilets to cover up the smell'. One discussant boy said the use of alcohol was a trend for the student generation of 15-18 years and three quarters of them were most likely to be involved in the use of alcohol. This revealed that there is a subculture among the students that these drugs have to be used. Other discussants described the severity of the problem by saying that drug use begins as early as class 6, 7 and 8 of primary school. One key informant said the problem was very serious because they only notice it in its effects and not in the initial stages by noting signs like burnt fingers,

insensitive behaviour and chest problems to the extent that the student can't participate in games.

Most of the drugs were strongly disapproved by the respondents as demonstrated in (Table 5). Alcohol and miraa were the least strongly disapproved and this could be due to the great availability of these drugs and that people usually accept to live with users. Bhang was strongly disapproved, probably because it is not really accepted by everybody and those who use it do it secretly.

Table 5. Approval/Dissapproval of Drug Use

DRUG TYPE	FREQUENCY	%
ALCOHOL		
APPROVE	115	24.5
DISAPPROVE	136	29
STRONGLY DISAPPROVE	218	46.5
TOTAL	469	100
TOBACCO		
APPROVE	82	18.2
DISAPPROVE	124	27.6
STRONGLY DISAPPROVE	244	54.2
TOTAL	450	100
MIRAA (KHAT)		
APPROVE	118	26.3
DISAPPROVE	130	29.0
STRONGLY DISAPPROVE	201	44.8
TOTAL	449	100
BHANG (CANNABIS)		
APPROVE	89	19.6
DISAPPROVE	73	16.1
STRONGLY DISAPPROVE	292	64.3
TOTAL	454	100

Those who either strongly disapproved or only disapproved use of these drugs; most 69.7% (n = 225) gave social reasons for alcohol, for tobacco most 61.4% (n = 215) gave biological

reasons, for khat 47.6% (n = 193) gave psychological reasons and 43.7% (n= 222) gave social reasons for bhang. For the respondents who approved use of these drugs, peer pressure was a reason given by most of them for alcohol 57.4% (n=115), tobacco 58.2% (n=67) and *bhāng* 39.2% (n=79). The major 40.2% (n=97) reason for approval of khat was the courage effect it has on the user.

There was strong disapproval for use of the drugs by both sexes. The males strongly disapproved use of alcohol, tobacco, khat and bhang in the respective percentages 45.2%, 53.2%, 43.8% and 64.4% (Table 6). The females also strongly disapproved use of alcohol, tobacco, khat and bhang in the respective percentages 48.3%, 55.7%, 46.4% and 64.1% (Table 6). For most of the drugs the females disapproved more than the males, this could be part of gender identity as a result of differential socialization.

Table 6. Approval/ Disapproval of Drug Use By Sex

DRUG	SEX	
	MALE	FEMALE
ALCOHOL		
APPROVE	79 (27.1%)	36 (20.5%)
DISAPPROVE	81 (27.7%)	55 (31.3%)
STRONGLY DISAPPROVE	132 (45.2%)	85 (48.3%)
TOTAL	292 (100%)	176 (100%)
TOBACCO		
APPROVE	52 (18.4%)	30 (18%)
DISAPPROVE	80 (28.4%)	44 (26.3%)
STRONGLY DISAPPROVE	150 (53.2%)	93 (55.7%)
TOTAL	282 (100%)	167 (100%)
KHAT		
APPROVE	79 (28.1%)	39 (23.2%)
DISAPPROVE	79 (28.1%)	51 (30.4%)
STRONGLY DISAPPROVE	123 (43.8%)	78 (46.4%)
TOTAL	281 (100%)	168 (100%)
BHANG		
APPROVE	52 (18.3%)	37 (21.8%)
DISAPPROVE	49 (17.3%)	24 (14.1%)
STRONGLY DISAPPROVE	183 (64.4%)	109 (64.1%)
TOTAL	284 (100%)	170 (100%)

Factors influencing attitude towards the use of the drugs

Class was statistically related to approval/disapproval use of alcohol ($p=0.03324$). The Form twos were more likely to approve use of alcohol (33.6%) compared to the other classes; Form 1(16.7%), Form 3 (22.6%) and Form 4 (24.8%); (Table 7). While the Form ones were more likely to strongly disapprove (58.8%) use of alcohol compared to the other forms.

Table 7. Relationship between Class and Approve / Disapproval use of Alcohol

	APPROVE	DISAPPROVE	STRONGLY DISAPPROVE	TOTAL
FORM 1	17 (16.7%)	25 (24.5%)	60 (58.8%)	102 (100%)
FORM 2	40 (33.6%)	36 (30.3%)	43 (36.1%)	119 (100%)
FORM 3	28 (22.6%)	38 (30.6%)	58 (46.8%)	124 (100%)
FORM 4	29 (24.8%)	34 (29.1%)	54 (46.2%)	117 (100%)
TOTAL	114	133	215	462

Chi-Square = 13.69490 df = 6 p = 0.03324

The same relationship was noted with approval/disapproval of miraa use and class, again the Form twos were more likely to approve miraa use ($p = 0.00177$) and at the same time Form ones were more likely to strongly disapprove miraa use. Attitude towards use of tobacco or bhang was not statistically related to class of study.

Being a day scholar or a boarder was statistically related to approval/disapproval of miraa use ($p=0.008$). The day scholar was more likely to approve than a boarder, 30.4% compared to 20.8%, while a boarder was more likely to strongly disapprove use by 52.5% compared to 38.5% (Table 8).

Table 8. Relationship between being a Day Scholar/Boarder and Approval/Disapproval

mirza use.

	APPROVE	DISAPPROVE	STRONGLY DISAPPROVE	TOTAL
DAY	73 (30.4%)	75 (31.3%)	92 (38.3%)	240 (100%)
BOARDER	42 (20.8%)	54 (26.7%)	106 (52.5%)	202 (100%)
TOTAL	115	129	198	442

Chi-Square = 9.56878 df = 2 p = 0.008

When the students were asked about their views on students who use/abuse drugs, 26.9% felt that they were more than average antisocial, 67.1% felt that they were more than average criminal or rebellious, 74.5% felt that they were less than average sensible and 76% felt their academic performance was less than average (Table 9).

Table 9. Views on Drug Users

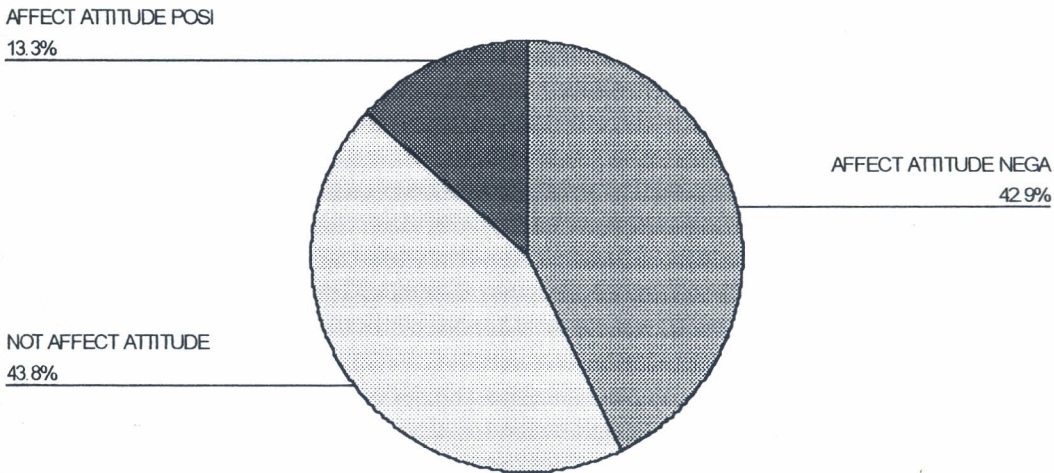
CHARACTER	FREQUENCIES			
	< AVERAGE	AVERAGE	> AVERAGE	TOTAL
ANTISOCIAL	186 (39.7%)	156 (33.3%)	126 (26.9%)	468 (100%)
CRIMINAL/ REBELLIOUS	89 (19%)	65 (13.9%)	314 (67.1%)	468 (100%)
SENSIBLE	347 (74.5%)	77 (16.5%)	42 (9%)	466 (100%)
ACADEMIC PERFORMANC	359 (76%)	76 (16.1%)	37 (7.8%)	472 (100%)

In relation to these findings, FGDs had different views as to whether students involved in drug use were antisocial. Most participants felt that the extreme users especially those who use bhang are usually in a group of their own, while the occasional users interact with others as usual and that sometimes you would not know whether they are involved in bhang taking or not. One girl from a day school had this to say about the bhang users 'Normally they are social and not shy, they are lively'. Two FGDs composed of boy day schools felt the academic performance of students who use drugs was totally poor. The other four groups had mixed feelings, generally they felt that some occasional users of these drugs had good

academic performance and poor performance was associated with the extreme users (those using the drug on a regular basis). All the groups felt that drug users especially bhang users were senseless and rebellious.

When the respondents were asked whether advertisements in the print/electronic media affected their attitude towards use of these drugs, 44% said they were not affected, 43% said they were affected negatively (advertisements discourage them from using these drugs) and 13% were affected positively (advertisements encourage them to use the drugs); Figure 9.

Figure 9 Are You Affected By Advertisement? (n=457)



From the focus group discussions, some participants pointed out some advertisements that encourage use of the drugs. One participant said 'The Smirnoff advert on television really makes one feel you can reach a very wonderful world.' and another said 'The Aspen cigarette smoker can prosper so well.' All these sentiments were from boys. Many of the discussants felt that the television advertisements were the most influential.

5.4 PRACTICE OF DRUG USE

The use of these drugs and some of the trends especially those associated with initiation into use were studied. Correlation between use and some variables was also observed.

Prevalence and Factors Influencing Ever Use of the Drugs

It was observed that the male life time prevalence for alcohol use was 57.5% while that of females was 44.9% and this difference was statistically significant ($p=0.0081$) Table 10.

Table 10. Relationship between ever use of Alcohol and Sex

SEX	EVER DRUNK ALCOHOL		
	YES	NO	TOTAL
MALE	169 (57.5%)	125 (42.5%)	294 (100%)
FEMALE	79 (44.9%)	97 (55.1%)	176 (100%)
TOTAL	248	222	470

Chi-Square = 7.0090 df = 1 p = 0.0081

Lifetime prevalence for tobacco and bhang use were also found to be statistically related to sex. Tobacco had a male lifetime prevalence of 26.2% ($n=282$) and a female prevalence of 14.9% ($n=175$) with $p = 0.0042$. While bhang had a male prevalence of 12.9% ($n=279$) and a female prevalence of 6.6% ($n=166$) with $p = 0.0372$. Miraa life prevalence for males was 33.2% ($n=286$) and 25% ($n=172$) for females, this was not statistically significant ($p>0.05$).

Prevalence for past 12 month use for the various drugs revealed that alcohol had the highest prevalence with males having 42.8% and females 31%, while bhang had the smallest prevalence for both the sexes 6.9% (males) and 2.8% (females) Table 11.

Table 11 Use of Drug in the past 12 months by sex

SEX	NUMBER (n)	USE IN PAST MONTHS (FREQ)	%
ALCOHOL			
MALE	301	129	42.8
FEMALE	179	61	31
TOBACCO			
MALE	301	35	11.6
FEMALE	179	12	6.7
KHAT			
MALE	301	66	21.9
FEMALE	179	22	12.2
BHANG			
MALE	301	21	6.9
FEMALE	179	5	2.79

There was a statistical relationship between hobbies and ever use of alcohol ($p=0.002$).

The students who were in the informal clubs were more likely to have drunk alcohol compared to the ones in formal clubs i.e. 60.7% compared to 47.9% (Table 12).

Table 12. Relationship between ever use of Alcohol and Hobbies among both Sexes

HOBBIES	EVER DRUNK ALCOHOL		TOTAL
	YES	NO	
INFORMAL CLUBS	136 (60.7%)	88 (39.3%)	224 (100%)
FORMAL CLUBS	80 (47.9%)	87 (52.1%)	167 (100%)
OTHER	29 (40.3%)	43 (59.7%)	72 (100%)
TOTAL	245	218	463

Chi-Square = 11.76685 df = 2 p = 0.002

The same trend was noted with ever use of miraa and hobbies. Students in the informal group were more likely to have used miraa by 35.9% compared to 25.9% of the formal group ($p=0.03049$). The informal groupings could be having social environments that are conducive to the use of these drugs. Ever use of miraa was also statistically related to being a day scholar or a boarder ($p=0.043$). Day scholars (34%) were more likely to have used miraa than the boarders (25.2%). Probably the poor attitude towards the use of miraa among the

day scholars and the more exposure they had in terms of availability of miraa and venues to chew it may have contributed to this finding. The ever use of the other drugs was not influenced by hobbies or being day scholar/boarder ($p > 0.05$).

Factors Influencing Past Year Use of the Drugs

Attitude was statistically related to past 12 month alcohol use ($p=0.0017$). Those who approved alcohol use were more likely to have used alcohol in the past 12 months than those who strongly disapproved, 83.3% compared to 62.8% (Table 13).

Table 13. Relationship between Attitude towards use of Alcohol and past 12 month use of Alcohol among both Sexes

ATTITUDE	PAST 12 MONTH USE OF ALCOHOL		TOTAL
	YES	NO	
APPROVE	57 (83.3%)	11 (16.2%)	68 (100%)
DISAPPROVE	76 (82.6%)	16 (17.4%)	92 (100%)
STRONGLY DISAPPROVE	54 (62.8%)	32 (37.2%)	86 (100%)
TOTAL	187	59	246

Chi-Square = 12.7147 $df = 2$ $p = 0.0017$

The same trend was noted between attitude and use of miraa in the past 12 months. Those who approved were more likely to have used miraa in the past 12 months ($p=0.0026$). 82.7% of those who approved compared to 50% of those who strongly disapproved. This was in agreement with the hypothesis of this study, that poor attitude is associated with drug use for alcohol and miraa. The other drugs tobacco and bhang did not have a significant statistical relationship between the attitude towards their use and their prevalence of the past 12 month use ($p > 0.05$). Class of study was statistically related to past 12 month use of alcohol ($p=0.01689$). The Form 2s and 4s were almost equally likely to have used alcohol in the past 12 months 83.6% and 83.3% respectively, while the Form 1s 62.2% were less likely (Table 14).

Table 14. Relationship between Class and past 12 month use of Alcohol among both sexes

CLASS	DRUNK ALCOHOL IN THE PAST MONTHS		TOTAL
	YES	NO	
FORM 1	28 (62.2%)	17 (37.8%)	45 (100%)
FORM 2	51 (83.6%)	10 (16.4%)	61 (100%)
FORM 3	54 (69.2%)	24 (30.8%)	78 (100%)
FORM 4	55 (83.3%)	11 (16.7%)	66 (100%)
TOTAL	188	62	250

Chi-Square = 10.20673

df = 3

p = 0.01689

A similar trend, that was statistically significant was noted between class and past 12 month use of tobacco (p=0.017). The Form 2s and 4s were more likely to have used tobacco in the past 12 months- 59.1% and 60.6% respectively, while the Form 1s were least expected (22.2%). Hobbies and past 12 month use of alcohol was statistically related (p=0.0448). The students in the informal clubs were more likely to have used alcohol than the formal club students, 80.4% versus 72% (p = 0.044).

The level of knowledge on the effects of alcohol was not statistically related to use of alcohol in the past 12 months (p= 0.646). This was not in favour with the study's hypothesis, that poor knowledge on substance use and their consequences is related to substance use. A similar trend was found with the other drugs that level of knowledge on the effects of each drug was not statistically significant to the past 12 month use of the drug (P > 0.05).

Being a day scholar or boarder was not statistically significant to the prevalence in the past 12-month use of the various drugs (P> 0.05). This also was not in favour of the study hypothesis, that higher prevalence of substance use is associated with students in day schools compared to those in boarding schools though generally the day scholars seemed to be more of the users (Table 15).

Table 15. Use of Drugs in the Past 12 months by Day Scholar/Boarder among both Sexes

DAY / BOARDER	NUMBER (n)	USE IN PAST 12 MONTHS (FREQ)	%
ALCOHOL			
DAY	137	105	76.6
BOARDER	114	83	72.8
TOBACCO			
DAY	54	29	53.7
BOARDER	47	18	38.3
MIRAA			
DAY	84	56	66.7
BOARDER	52	31	59.6
BHANG			
DAY	27	18	66.7
BOARDER	19	8	42.1

* $p > 0.05$ for all drugs by day/boarder

Among the past 12 month users there was poly-drug use and there was statistical significance between those who smoke tobacco and the use of alcohol, miraa and bhang as $p < 0.05$ (Tables 16, 17). Tobacco use could be an indicator towards the use of the other drugs.

Table 16. Relationship between past 12 month use of alcohol and past 12 month use of tobacco among both sexes

PAST 12 MTS USE OF ALCOHOL	PAST 12 MONTH USE OF TOBACCO		TOTAL
	YES	NO	
YES	41 (55.4%)	33 (44.6%)	74 (100%)
NO	1 (8.3%)	11 (91.7%)	12 (100%)
TOTAL	42	44	86

Chi-Square = 9.15664

df = 1

p = 0.00248

Tables 17. Relationship between past 12 month use of tobacco and past 12 month use of miraa among both sexes

Used tobacco in the past 12 Mts.	Chewed miraa in the past 12 Mts.		TOTAL
	YES	NO	
YES	28 (84.8%)	5 (15.2%)	33 (100%)
NO	14 (46.7%)	16 (53.3%)	30 (100%)
TOTAL	42	21	63

Chi-Square = 10.30909

df = 1

p = 0.00132

The FGDs generally said that most bhang smokers were more likely to use the 'hard' drugs and were usually tobacco smokers, having started use of tobacco before getting involved with bhang.

Religion and age among the independent variables also did not have a statistical significant relationship with any of the dependent variables.

Other Trends of Drug Use

Initiation into drug use was most common in the age group 14-16 years in the following percentages 39.6%, 39.1%, 45.6% and 61.5% for alcohol, tobacco, miraa and bhang respectively (Table 18). From the same table it is observed that most of alcohol or tobacco use initiated at age 13 years and below.

Table 18. Age at first use of the drugs among respondents

DRUG	< or = 10yrs	11-13yrs	14-16yrs	17-19yrs	TOTAL
ALCOHOL	38 (19.8%)	56 (29.2%)	76 (39.6%)	22 (11.5%)	192 (100%)
TOBACCO	10 (21.7%)	14 (30.4%)	18 (39.1%)	4 (8.7%)	46 (100%)
KHAT	13 (14.4%)	24 (26.7%)	41 (45.6%)	12 (13.3%)	90 (100%)
BHANG	2 (7.7%)	2 (7.7%)	16 (61.5%)	6 (23.1%)	26 (100%)

When the respondents were asked who first introduced them to the drugs most said friends in the following percentages 50%, 54%, 69% and 77% for alcohol, tobacco, miraa and bhang respectively. Most of the drug users were occasional users 70% (alcohol), 50% (tobacco) and 57% (miraa) though bhang had an equal number of occasional and once/ week users 35% for each. From the FGDs occasional use of tobacco and miraa was explained by the fact that many of the users use these drugs when in stress e.g. during exams or when they have plenty of homework. On the other hand the bhang users who are regular users are the addicts, while the occasional users are those who use when in stress.

When respondents using any of these drugs were asked what their reason for first use was, a majority said curiosity in the following percentages 50% (n=166) of those using alcohol, 65% (n=40) of those using tobacco and 59% (n=22) of those using bhang. Most miraa users 46.8% (n=79) said experimentation.

The most frequent place for using these drugs varied for each type of drug. Thirty six percent preferred a meeting place to drink alcohol, 43.6% frequently smoked cigarettes at home, 35.4% used miraa at home while 44% of bhang users usually used it at a meeting place (Table 19).

Table 19 Common Place of Drug Use

DRUG	PLACE				TOTAL
	HOME	SCHOOL	MEETING PLACE	OTHERS	
ALCOHOL	46 (27.9%)	4 (2.4%)	60 (36.4%)	55 (33.3%)	155 (100%)
TOBACCO	17 (43.6%)	5 (12.8%)	13 (33.3%)	4 (10.5%)	39 (100%)
KHAT	29 (35.4%)	6 (7.3%)	23 (28%)	24 (29.5%)	82 (100%)
BHANG	4 (16%)	4 (16%)	11 (44%)	6 (24%)	25 (100%)

The FGDs revealed some of the venues as by the river, in the toilets or the fences/bushes of school, at parties and all these were known as 'hideouts'. Some occasions at home like Christmas parties were sometimes conducive to taking alcohol as some of the discussants felt somehow parents 'allowed them'.

When the respondents who had never used the various drugs were asked for their reasons, those who had never used alcohol mainly (50% n=242) gave social reasons. The other never users of tobacco, miraa and bhang gave miscellaneous reasons in the following percentages 55.2%, 48% and 47.5% respectively. These reasons included views like 'It's bad to use', 'I

am under-age', 'I have no money' 'smoking gives you a bad breath'. Reasons for not using the various drugs in the past 12 months also varied but for all the drugs most gave miscellaneous reasons by the following percentages 55% (n=139), 60% (n=128), 64% (n=144) and 79.6% (n=93) respectively for alcohol, tobacco, miraa and bhang. These reasons included expressions like 'It made me feel bad', 'It's disgusting' (especially for miraa), 'The smoke choked me'; most were personal experiences and feelings that discouraged them to continue use.

Logistic Regression

Multi-variate regression was done on the dependent variables (past 12 month use of the various drugs). The effect of each independent variable was determined by controlling the effect of the other variables. Starting with all the independent variables in the model, the best model after removing the non significant variables were made for the four drugs. The independent variables considered in the multivariate models included sex, age, religion, class of study, hobbies/clubs, knowledge on effects of the drugs on use and attitude towards use of drugs.

Past 12 Months Use of Alcohol

The variables hobbies and attitude were persistently significant in all models that were obtained for the past 12 month use of alcohol. Hobbies and attitude that is being in informal clubs and poor attitude seemed to be predictors of alcohol use in the past 12 months ($p < 0.05$); Table 20.

Table 20. Multivariate Regression Model for Past 12 Months use of Alcohol

Variable	B	Wald	Significance	Odds Ratio	95% CI
Class (o)					
Form 1	-0.993	1.88	0.17	0.37	(8.96E-02-1.532)
Form 2	0.261	0.135	0.713	1.298	(0.323-5.21)
Form 3	-0.925	3.314	0.069	0.397	(0.147-1.073)
Form 4 (r)	0				
Hobbies/Clubs					
Informal	1.058	4.239	0.04	2.881	(1.052-7.888)
Formal	0.271	0.27	0.603	1.311	(0.472-3.637)
Other (r)	0				
Knowledge on effects of Alc Use (o)					
Good	-0.338	0.467	0.494	0.713	(0.27-1.881)
Poor&Fair (r)	0				
Attitude Toward alcohol use(o)					
Approve	1.023	5.063	0.024	2.781	(1.141-6.78)
Disapprove	1.388	10.804	0.001	4.008	(1.751-9.17)
S/Disapprove (r)	0				

Key: CI-Confidence interval (o) Overall Variable (r) Reference point

Past 12 Months use of Tobacco

No independent variable was significantly related to past 12 months tobacco use in the following model (Table 21).

Table 21. Multivariate Regression Model for Past 12 Months use of Tobacco

Variable	B	Wald	Significance	Odds Ratio	95% CI
Age (o)					
13 yrs	-20.411				
14 yrs	-1.926	1.531	0.216	0.146	(6.89E-03-3.08)
15 yrs	-1.487	1.7	0.192	0.226	(2.42E-02-2.114)
16 yrs	-0.848	0.535	0.465	0.428	(4.41E-02-4.159)
17 yrs	-0.781	0.556	0.456	0.458	(5.89E-02-3.564)
18 yrs	0.372	0.115	0.734	1.451	(0.169-12.423)
19 yrs (r)					
Sex (o)					
Male	-0.482	0.494	0.482	0.618	(0.161-2.367)
Female (r)	0				
Knowledge of Effects of Tob use (o)					
Good	4.72E-02	0.002	0.962	1.048	(0.149-7.37)
Fair	-0.421	0.488	0.485	0.657	(0.202-2.136)
Poor (r)	0				
Attitude towards Tob use (o)					
Approve	0.607	0.74	0.39	1.834	(0.46-7.31)
Disapprove	-0.446	0.606	0.436	0.64	(0.208-1.967)
Str/Dis (r)	0				

Key; CI-Confidence interval (o) Overall Variable (r) Reference point

Past 12 Months Use of Miraa

Attitude towards use of miraa was significantly positively associated with past 12 months use of miraa i.e. good attitude leading to non-use, while attitude towards use of bhang was significantly negatively associated with past 12 months use of miraa meaning that good attitude towards the use of bhang could lead up to miraa use (Table 22).

Table 22. Multivariate Regression Model for past 12 Months use of Miraa

Variable	B	Wald	Significance	Odds Ratio	95% CI
Sex (o)					
Male	0.587	1.523	0.217	1.798	(0.708-4.563)
Female (r)	0				
Attitude towards Use miraa (o)					
Approve	2.774	11.028	0.001	16.028	(3.117-82.412)
Disapprove	0.734	1.785	0.181	2.084	(0.71-6.117)
Str/ Dis (r)	0				
Attitude towards use of bhang (o)					
Approve	-1.893	5.13	0.024	0.151	(2.93E-02-0.775)
Disapprove	-0.816	1.551	0.213	0.442	(0.122-1.598)
Str/Dis (r)	0				
Knowledge on effects bhang (o)					
Good	-1.193	2.35	0.125	0.303	(6.60E-02-1.394)
Fair	-0.61	1.017	0.313	0.543	(0.166-1.779)
Poor (r)	0				

Key: CI – Confidence Interval (o)- Overall Variable (r)- Reference point

Past 12 Months use of Bhang

All the independent variables seemed not to have any significant effect on past 12 months use of bhang (Table 23).

Table 23. Multivariate Regression Model for past 12 months use of Bhang

Variable	B	Wald	Significance	Odds Ratio	95% CI
Religion (o)					
Christian	1.765	0.98	0.322	5.843	(0.177-192.409)
Muslim (r)	0				
Knowledge of Eff of bhang use (o)					
Good	0.43	1.56	0.212		
Fair	2.002	0.052	0.82	1.538	(3.82E-02-61.95)
Poor (r)		1.693	0.193	7.399	(0.363-150.763)
Attitude towards Tob use (o)					
Approve	-1.787	1.685	0.194	0.167	(1.13E-02-2.488)
Disapprove	0.303	0.047	0.829	1.354	(8.67E-02-21.15)
Str/Dis (r)	0				
Attitude Mir use (o)					
Approve	1.838	2.124	0.145	6.283	(0.531-74.404)
Disapprove	2.492	2.839	0.092	12.081	(0.666-219.201)
Str/Dis (r)	0				

Key: CI – Confidence Interval (o) Overall Variable (r) Reference point

CHAPTER 6: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

6.1 DISCUSSION

The age range of the high school students studied was 13 – 21 years with a mean age of 16.5. This was within the normal age range of high school students in Kenya, which is 14 – 18 years with a few extremes on the lower and upper ends of the range. The class distribution of 22%, 26%, 27% and 25% for Forms 1, 2, 3 and 4 respectively gave a fairly good representation of all the classes considering that all schools which participated in the study had all these classes within their set-up. Most of the respondents were Christians (85%), giving a similar picture of the religious distribution of the wider society of Kenya. Day scholars (54%) were slightly more than the boarders (46%). Day schools in Nairobi make up a higher percentage of 80% compared to the boarding schools. Most of the students were involved in informal activities (48%). A possibility for this could be that students in Nairobi have more access to informal activities such as meeting at entertainment venues, watching movies, dating and driving.

Most of the students knew that alcohol, tobacco, khat and bhang were drugs in the following percentages 86.5%, 75.4%, 80% and 78.8% respectively. What most knew about these drugs were the psychological effects on use. This was especially so for all the drugs except tobacco. This study didn't determine the sources of information about the drugs, but it is possible that this knowledge may have been obtained from personal experience or interaction with peers. This is similar to the findings from a study done on Israeli urban adolescents (67) whereby information based on personal experience was prominent as concerning alcohol, cigarettes and cannabis especially among male users. This same study also found other

sources of information such as television a primary source, the print media a secondary source, with physicians/nurses, relatives and school teachers being less likely to be informants to adolescents about drugs. The main aspect of knowledge on tobacco was its biological effects i.e. causing lung cancer. This could be because of the long and widespread period of documentation that it is a causative factor for lung cancer. When the level of knowledge on the effects of these drugs was graded, most of the students had fair or limited knowledge. This implies that the knowledge the students have about the drugs is not adequate, despite this topic being covered in some subjects within the school curriculum. There could be inefficiency in all the sources of information to the students about drug use.

During the focus group discussions alcohol, tobacco, miraa and bhang were mentioned as the major drugs of use, alcohol being the most commonly used, while bhang the least. Other 'medical' and 'hard' drugs such as piriton, cough syrups, diazepam, hashish and herione were also mentioned. This revealed the wide scope of drugs the students have access to. *Miraa not being considered a drug by some students, ties with the general view that miraa is not a drug because of the perception that 'it has no bad consequences'*. The students had other names for the drugs other than what the general public uses, these included 'booze', 'hotstuff' (spirits), 'fermented porridge' (local brew) for the various forms of alcohol, while the tobacco cigarettes were known as 'fegi', 'grass' for miraa and 'weed', 'boza' or 'ganja' for bhang. The use of these names is a way of communication among themselves and at the same time concealing from those who should not understand what they are talking about.

Most students knew that the main ways of using drugs was by drinking and smoking, which goes by the major drugs of use – alcohol and smoking tobacco. This compares with these two studies (41,68) done among youth in Kenya. This is not surprising as these two drugs are widely manufactured legally, are easily available to consumers and are advertised liberally in the media. Some of the factors contributing to this is the fact that alcohol and tobacco bring in one of the largest revenues to Kenya forming a major part of the economy thus the market liberalisation and the industry of these two drugs also provide employment to a part of the Kenyan population.

This study found that the relationship between being a day scholar/boarder and the level of knowledge on the effects of tobacco was statistically significant. The finding that the day scholar had more knowledge on the effects of tobacco than the boarder may be related to greater exposure for instance observing or experiencing many of the effects. As was established from the FGDs, more of the boys knew the effects of the drugs and in one of the discussions composed of a boy's day school from Eastlands knowledge on effects was wider in terms of scope.

There was partial acceptance of the various intervention areas where students with drug problems can get help from in the following percentages 70%, 68.5%, 64.7% and 66% for school, parents, hospital and religious leaders respectively. This was further explained by the FGDs, where opinions as to why some of these areas were not accepted were pointed out. These included lack of confidentiality in the counselling departments of schools, lack of communication between students and parents, bad examples from some teachers like coming

to school drunk or buying for some students alcohol or cigarettes and lack of access to the concerned specialists in the hospitals. From the foregoing, while there are intervention areas, they are not being adequately accessed and efforts need to be made to remove roadblocks to their use.

Most students felt that drug use is a serious problem and this was extensively explained in FGDs and the in-depth interviews; occasioned by the number of students involved and the effects of the drugs on the students. This is in agreement with a survey done by UNDCP (10) which showed that drug use is a problem in school because it undermines a student's academic ability and performance and at the same time brings into the school environment illegal activities such as theft, drug selling, violence etc.

There was strong disapproval of all the drugs in the following percentages 46.5%, 54.2%, 44.8% and 64.3% for alcohol, tobacco, miraa and bhang respectively. Bhang was disapproved most while khat the least a finding that was consistent with Yambo's study (41). This is not entirely unexpected, as bhang is illicit in Kenya, while khat is socially accepted in some communities. The main reasons for disapproval of alcohol and bhang were social reasons, while for khat the psychological effects and tobacco its causative factor on lung cancer. The FGDs generally suggested similar reasons and again these reasons were out of observance or experience. Approval was mainly because of peer reasons and FGDs suggested occasional use was acceptable so long as one is in control and one indication of use was stress. The male students tended to approve more, while the female tended to disapprove. This trend was noted in Mwenesi's study (8). The fact that the students could

express their approval to use of substances in the FGDs, brings out the importance of qualitative methodology in this study. In the FGDs the students could talk freely and issues were generalised. However through the questionnaire, answers were individualised and this being a personal behaviour there is a possibility of some inhibition not allowing for the real answers.

This study found that class of study was statistically related to approval/disapproval use of alcohol or miraa. The Form 2s were more likely to approve use of these drugs while the Form 1s were the strong disapprovers. Early use of drugs in the upper primary classes was revealed in the focus group discussions, this means any initiatives to improve attitude should be started in upper primary and may be reinforced appropriately in the high school classes. The Form 2 class is usually composed of the age group (14 – 16) years, which the study observed, was the commonest age of initiation into using these drugs. The same was found in other studies (41,69). Concurrently the Form 2s and 4s were found more likely to have been using alcohol or tobacco in the past 12 months. Generally the Form 1s tended to be more emphatic in rejecting the use of these drugs, while the Form 2s and 4s were most liberal in their attitudes and behaviours. The Form 3s seemed to be in between the extremes of either accepting or rejecting the use of these drugs. These findings could be related to the different environmental changes experienced in each class for example the Form 1s are usually under suppression from bullying or the new environment they have joined so that they fear to participate or venture into such activities like drug use. The Form 2s after having been suppressed while in Form 1 acquire some kind of freedom and excitement making them get involved in drug use. By the time, they get to Form 3 the euphoria from drug use is reduced leading to less involvement in this activity. At Form 4 level, the students may assume they

are adults with more freedom, thus more involvement in drug use. Nevertheless, there's a need for each class to have focused education about drug use.

A day scholar was significantly more likely to approve use of miraa and even to have ever used it than a boarder. The FGDs of day schools revealed that miraa use was something that was accepted by some discussants because they felt it had no bad effects, was easily available and relatively cheap. Implying that miraa was socially accepted by some of the students. This attitude and behaviour has to be changed and instilled into the day scholars through appropriate health education

Views about the users generally implied that most students who were involved in drug abuse were anti-social, criminal/rebellious, had less than average sensible behaviour and poor academic performance. This is similar to what has been expressed in other studies (10,12,18,19) that students involved in drug use usually show deficits in school performance, family and peer relationships and delinquency. From the focus group discussions there were some views, for example that some occasional users usually have good academic performance so that, a few students believe that some of these drugs can improve academic performance. Health education should focus on such misconceptions in order to correct them.

Thirteen percent of the respondents said that they were affected positively by the media advertisements on alcohol or cigarettes, that they were encouraged to use these drugs. The FGDs also pointed out some of the advertisements that the students seemed enticed to, these

were mainly television advertisements. These findings are similar to an American study (52), which observed that some students believed that by using tobacco or alcohol they would become trendy and successful as depicted by advertisements. Knowing about the students' perception of advertisements for cigarettes and alcohol is an important prerequisite for the design of effective health education programmes to make the students more aware of the social pressures acting on them in an effort to mould good attitudes.

The life time ever use of alcohol, tobacco, khat and bhang were as follows 57.5%, 26.2%, 33.2% and 12.9% respectively for males, while for females were as follows 44.9%, 14.9%, 25% and 6.6% respectively. Thus alcohol is the most commonly ever used drug followed by khat, tobacco then bhang. There was a statistical significant relationship between ever use of alcohol, tobacco and bhang with sex. The males were more likely to have ever used these drugs, a similar trend found in other studies (42,68,69). On the past 12-month use, the prevalences were much lower particularly for tobacco, khat and bhang with male prevalences of 11.6%, 21.9% and 6.9% respectively. The females had much lower prevalences. This was unlike one study done on high school students in Greece (45) in which the past year prevalences were high. Underreporting on use or the lack of money by the student to purchase the drugs may explain these low prevalences. The downward trend of past year use from the ever use prevalence is similar to other studies (41,42,68).

This study found that being in informal clubs/activities was significantly related to use of alcohol in one's lifetime or in the past 12 months. Similarly, this was true for lifetime use of khat. This is consistent with findings from other studies (12,48). Informal groups usually do

not have adults who may hinder the students from using these drugs. Usually in such settings, there's easy availability of alcohol and possibly, other drugs and peer pressure for conformity would be strong. Peer education should focus on the informal groupings.

Attitude was significantly related to use of alcohol or khat in the past 12 months. Poor attitude being a more likely indicator to the use of these drugs. This was in agreement with the study hypothesis that poor attitude on substance use is associated with substance use. The findings were unlike those of a study done on Kenyan youth (41) in which good attitude was not consistent with good behaviour. The differences in results may be due to different methodologies. However, if the students' attitude is a good predictor then good attitudinal changes should be emphasised in health education. Informal hobbies and poor attitude were persistent predictors to past 12 months alcohol use ($p < 0.05$) when all the other independent variables were controlled for. This re-emphasises the need to penetrate informal settings to discourage drug use and to encourage good attitude.

Not in favour with the study's hypothesis that poor knowledge on substance use and their consequences is related to substance use were the findings that there was no significant relationship between level of knowledge and the past 12-month use of the drugs. Though looking at the quality of knowledge, most students had only fair or limited knowledge, which was only knowing one aspect of the drug i.e. the Psychological effects only or the Biological effects only or the Social effects only. Complete knowledge of the drugs should be emphasised through health education. Other than knowledge, factors in the immediate or wider environment could be affecting use of these drugs. These include, the school work, the

family set up of individual students or the economic constraints. Another possibility is that the students may not be seeing the potential consequences of their behaviour until they receive the same message disseminated by their own peers. A peer knows who is in most need and is able to speak the same language to improve knowledge and understanding.

Being a day scholar or a boarder was found not to be related to the past 12-month use of the drugs. This finding was not in favour with the study hypothesis that higher prevalence of substance use is associated with day scholars compared to boarders. Both the day scholar or the boarder may be having equal access to the drugs though the former has easier access and the latter through dubious ways for example having a large supply of the drug that is hidden within the school and is used secretly at 'hide-outs' or sneaking out of school so as to use the drugs without the knowledge of school authorities. This implies all students whether boarder or day scholar need health education focusing on this issue, as they are all involved.

Poly drug use was common among the tobacco smokers; this was consistent with other studies (41,49,70). Tobacco use seemed to be a significant indicator for use of the other drugs i.e. alcohol, miraa or bhang. This implies health education should also pay attention to poly-drug use emphasising the role tobacco smoking may play in leading up to the use of other drugs. There could be a possibility that if use of tobacco can be curtailed, exposure to the other drugs could be reduced.

Most of the respondents who were using these drugs said friends were the initial introducers, this is consistent with other studies (41,71). However, few had family members or drug

dealers/pushers encouraging them into use. The FGDs explained this further by giving examples within the family context for example at Christmas parties or family celebrations, from siblings and out in the public drug pushers being found at strategic places like the shops that sell miraa or just outside school compounds. Furthermore, the respondents gave various venues for the use of these drugs which included home, school, meeting places and many hideouts. The drug problem involves many people at various venues and not only students at school, thus health education strategies should focus on families, peers and the public as a whole.

When the respondents were asked for reasons as to why they had never used or stopped using these drugs, many gave miscellaneous reasons that were mainly personal experiences or feelings. For instance 'smoking gives you a bad breathe', 'chewing miraa is disgusting', 'it is a waste of time' were reasons from never users. Those who had stopped using these drugs said 'bhang made me feel bad', 'the smoke made me choke', 'I have no money to buy these things'. These expressions should be used as components of health education to discourage use.

The FGDs suggested means of preventing drug use and these included: that the Kenya law should include drug rehabilitation to the sentences the drug victims are serving so that, apart from punishment the victims are also helped out of the problem. They felt awareness of the problem in schools is inadequate so that this should be increased by use of experts on the topic and video shows that actually visualise the consequences of drug use/abuse. Awareness initiatives should be as early as standard 6 class of Primary School and peer counselling

among students was very much favoured by the discussants. They also felt that all advertisements of alcohol and cigarettes should have clear warnings on the hazards if these drugs are used. Parental guidance and family communication should be improved and their teacher's should be good examples to them. Finally, they suggested that there should be more government commitment in solving this problem because it is an issue affecting everybody.

Apart from the student discussants giving suggestions, the key informers felt that more teachers should be trained in counselling and be made aware of the drug abuse issues. With these skills and knowledge, they should be of more help to the students. They also suggested that the topic drug abuse should be taught emphatically with the appropriate subjects like Biology, Home Science, Religious Education and Social Education and Ethics. All these suggestions indeed indicate that a lot more could be done in terms of prevention.

6.2 LIMITATIONS OF THE STUDY

1. There was a high percentage of non-response for some of the compulsory questions. Drug use being a personal behaviour which the students would not want others especially adults to know about if they are involved is the most probable reason for the non-response which was anticipated. For example, question 13, which asked about the effects of the drugs on use; there was non-response for the various drugs in the following percentages: alcohol 11%, tobacco 21%, khat 18.7% and bhang 14.8%.
2. Some of the schools selected to participate, refused to participate. Probable reasons for this were that some school headmasters/mistresses felt that the exercise was a waste of their school time and others thought that by students participating, they would be encouraged into the use of the drugs. These were mainly the girls' schools so that male: female ratio was lower than expected. Out of the four girls' boarding (GB) schools that were meant to participate only one agreed, while among the girls' day (GD) schools selected one objected to participation. However all the boys' schools selected for the study agreed to participate.
3. The study could not tell what knowledge or attitude the individual students had before and after initiation into drug use. Therefore, the role of knowledge and attitude on initiation into use *could not be assessed*.
4. The study did not determine the sources of information about the drugs yet this may be of help in planning for health education. This would have to be done in a separate study, as it was beyond the scope of this work.

6.3 CONCLUSIONS

The main objective of this study was to find out the Knowledge, Attitude and Practice of Substance Use among high school students in Nairobi. Data was collected in May – June 1999, 481 students filled in the questionnaire, 6 Focus Group Discussions and 3 in-depth interviews were conducted. Conclusions from the study include;

The prevalence of substance use among the students is on the increase. The factors leading to this are:

- The poor attitude among the students towards the use of drugs; that is approval to use of the drugs.
- The informal clubs/activities that seem to have a conducive environment which encourages use of drugs.
- Smoking tobacco, which seems to lead to the use of the other drugs.
- Poor example from families or teachers who are involved in drug use.
- Inefficiency of the intervention areas where students could seek help from.
- Influence from alcohol and tobacco advertisements in the print and electronic media.
- The availability of drugs is cross-cutting and diffuse, in school and out of school.

This study being a quantitative and qualitative study revealed what has not been depicted from previous quantitative surveys; that most of the students approve use of drugs, yet when asked formally on paper they strongly disapprove.

The students seem to have the knowledge about drugs but they don't realise the potential consequences of their behaviour by using the drugs.

The students know where to seek help from when in drug related problems, but the type of help received from the intervention areas seems not to help them because of the various inefficiencies that include; lack of confidentiality in the counselling departments of school, poor skills and knowledge of the counsellors, poor example from teachers or parents and poor access to the psychologists or psychiatrists.

The students expressed the wish to have help by suggesting peer counselling, increased awareness initiatives to be started early in Primary school and the use of specialists for drug abuse prevention.

Many of the students who had stopped using the drugs or had never used the drugs gave miscellaneous reasons for this, including 'smoking gives you a bad breath', 'chewing miraa is disgusting', 'bhang made me feel bad', 'the smoke made me choke', 'I have no money to buy these things'. These reasons were mainly personal experiences and feelings that may be used to discourage potential users.

6.4 RECOMMENDATIONS

1. The Ministry of Education should set up adolescent centres where students can be referred to for counselling from school and from which specialists can go to various schools to help out.
2. Teachers in schools should be trained in counselling and on drug use and prevention. This will improve their skills in handling the students who use drugs.
3. Drug abuse should be taught in all the appropriate subjects in schools.
4. Target groups for Health Education should include the following;
 - The upper Primary classes before the drug use habits form and these messages should continue into the High school classes. This should not be taken categorically that information about drug use may only be instilled into the students from the upper primary stage, but that even in the lower classes knowledge may be provided to the children appropriately. From this study messages should be given appropriately for the various classes as attitude and behaviour seemed different in the classes e.g. Forms 2s and 4s seemed to be very liberal by attitude and behaviour towards the use of alcohol, tobacco and miraa compared to the other classes.
 - Informal clubs/activity groupings as they are more likely to use alcohol or miraa.
 - Tobacco smokers as they are more likely to have been initiated into tobacco smoking at an early age and at the same time to be poly-drug users.
5. Components of Health Education for the students should include;
 - Biological, Psychological and Social effects of drug use.
 - Some of the social pressures that influence the students into drug use, including the media advertisements for alcohol and cigarettes.

- The miscellaneous reasons given by the students for never using or stopping to use, as these are discouraging factors to potential drug users. These include reasons like students are underage to use, smoking gives you a bad breath, use of miraa is disgusting, smoking can lead to choking and after drinking alcohol you feel bad.

This information should be disseminated by teachers, parents and peers who should be taught about drug abuse by specialists in this field. Teaching aids like video shows that actually visualise the consequences of drug use should be used as reinforcers to the messages. Health Education should also include ways of developing skills that help one to avoid drug use.

6. The Ministry of Education and other sectors should network to provide Health Education to all the indirect groups involved in this problem. These groups include parents, teachers, the agents, the police and the public as a whole. The Health Education must be specific to each of these groups.
7. Peer education and counselling should be instituted in school. This is one of the most popular and therefore helpful strategies in assisting students. The peers should be encouraged to form clubs or support groups through which they could be trained to train others to help in counselling.
8. The qualitative study method for substance use is recommended because this method reveals more and real information on this personal behaviour among students.
9. Future studies should determine the knowledge and attitude before initiation into drug use and after start of use so that their roles in use are better defined. The sources

of information about the drugs should also be studied in the future as this may help in the planning of health education strategies.

7.0 REFERENCES.

1. Paxman JM. Laws and Policies Affecting Adolescent Health. WHO – Geneva 1987.
2. James Willis. Drug Use and Abuse. Faber and Faber Publication London. 1989.
3. Asuni T. Drug Abuse in Africa. Bulletin on Narcotics. 1986;Vol XXXVIII Num 1&2.
4. Kaplan and Sadock's : Synopsis of Psychiatry - Behavioural Sciences and Clinical Psychiatry 7th Edition. 1994.
5. W.H.O : Drug Dependence and Alcohol-Related Problems. A manual for community health workers with guidelines for trainers. 1986.
6. WHO publication. The Health of Young People : A challenge and a promise. 1995.
7. Hamburg DA. Early Adolescence: A Critical Time for Interventions in Education and Health. 1989.
8. Mwenesi H. Rapid Assessment of Drug Abuse in Kenya - A National Report. 1995.
9. Erik Nordberg. Substance Abuse in Sub –Saharan Africa. A brief overview. AMREF 1998.
10. UNDCP Report on Drug Abuse. 1991.
11. Gossop M, Grant M: Preventing and Controlling Drug Abuse. WHO 1990.
12. Kandel DB. High School Students who Use Crack and other Drugs. Arch Gen Psychiatry 1996; 53: 1: 71-80.
13. Hoffman JP. The Effects of Family Structure and Family Relations on Adolescent Marijuana Use. Int J Addict 1995; 30: 10: 1207-1241.
14. Carvalho V. Drug and Alcohol Use and Family Characteristics: a study among Brazilian high school students. J Addiction (England) 1995; 90: 1: 65-72.

15. Bahr SJ. Family, educational and peer influences on the alcohol use of female and male adolescents. *J Stud Alcohol* 1995; 56: 4: 457-469.
16. Werner MJ. Early Identification, Screening, and brief Intervention for Adolescent Alcohol Use. *Arch Paediatric Adolesc Med* 1995; 149: 11: 1241- 1248.
17. O'Donnell JA. *Young Men and Drugs - A nation-wide survey* Washington D.C. 1981.
18. WHO Report: Assessment of Public Health and Social Problems Associated with the use of Psychotropic Drugs. 1981.
19. Valois RF. Correlates of Aggressive and Violent behaviours among Public High School Adolescents. *J Adolescent Health* 1995; 16: 1: 26-34.
20. Burge V. Drug Use, sexual activity, and suicidal behaviour in U.S. high school students. *J Sch Health* 1995; 65: 6: 222-227.
21. NATION newspaper (Kenya). Sub-heading Drug Abuse Rising. 21 / 9 / 1998.
22. Cauri – Cowrie Pamphlet on Substance Abuse. (Letter from Africa.) Number 17– December 1997.
23. Levy SR. Correlates of HIV risk among young Adolescents in a Large Metropolitan Midwestern Epicenter. *J School Health* 1995; 65: 1: 28-32.
24. The Kenya Police Anti- Narcotic Unit Report 1998.
25. The Narcotic Drugs and Psychotropic Substances Control Act of 1994 (Kenya).
26. Primary Education Syllabus May 1992 Vol. 2.
27. Secondary Education Syllabus May 1992 Vol. 6.
28. Richard, JJ. Perceptions of Two Deviant and Two Nondeviant Groups. *Journal of Social Psychology* 1986; Vol. 126; 6: 783- 790.

29. Becker. The Labelling Theory. Outsiders: Studies in the Sociology of Deviance 1963
New York: Free Press.
30. UNDCP United Nations General Assembly - Special session on the World Drug
Problem New York, 8-10 June 1998.
31. WHO. Publication on Substance Abuse. 1993.
32. Adugna F. Khat Chewing among Agaro secondary school students, Agaro, Southwestern
Ethiopia. Ethiopian Med J 1994; 32: 3: 161-166.
33. WHO Geneva. Tobacco or Health: A Global Status Report. 1997.
34. WHO Geneva. The World Health Report – Life in the 21st Century, A Vision for All.
1998.
35. Acuda SW. Epidemiological study of drug use in urban and rural secondary schools in
Zimbabwe. Central Africa J Med 1994; 40: 8: 207-212.
36. Adelekan ML. Pattern of Substance Use amongst secondary school students in Ilorin,
northern Nigeria. West Afr J Med 1994; 13: 2: 91-97.
37. Mwaniki BW. Production and Sale of Alcohol and Tobacco Products in Kenya.
Nairobi: National Environment and Human Settlement Secretariat. 1982.
38. WHO International Agency for Research on Cancer: Alcohol Drinking 1988 Vol. 44.
39. Dhadphale M. Drug Abuse among secondary school students in Kenya. East African
Medical Journal, 1982 59: 152 – 156.
40. Owino G. Report on the Problems of Drugs among Kenyan Students in Secondary
Schools and Teacher Colleges. Paper presented at world conference in Nairobi. 1982
41. Yambo M. Epidemiology of Drug Use and Abuse: Final Report of a Pilot Study of
Nairobi City and Kyaume Sublocation, Kenya. 1983.

42. Adelekan ML. Self –reported Drug Use among Secondary School Students, in the Nigerian State of Ogun. Bulletin on Narcotics 1989; Vol. XII; 1&2: 109- 115.
43. Stevens M. Drug Use Prevalence in a Rural School Age Population: New Hampshire survey. Amer J Prevalent Med 1995; 11: 2: 105-113.
44. Kandel and Chen. The Natural History of Drug Use from Adolescence to the Mid-Thirties in a General Population Sample. Am J Public Health 1995; 85: 41-47.
45. Kokkevi Anna. The Epidemiology of Licit and Illicit Substance Use among High School Students in Greece. Am J Public Health 1991, 81: 48-52.
46. Christine. E.Cronk. Alcohol, Tobacco, and Other Drug Use among Rural/Small Town and Urban Youth: A Secondary Analysis of the Monitoring the Future Data Set Am J Public Health; 1997; 87: 760-764.
47. Kaigwa LM. Substance Abuse: A Study of Students' Knowledge, Attitudes and Practices at Two Universities in Nairobi, Kenya. MSc Dissertation from USIU. 1998.
48. Selnow GW. Formal Vs Informal Group Affiliations: Implications for Alcohol and Drug Use Among Adolescents. Journal of Studies on Alcohol; 1986; 47: 1
49. Bailey LS. Adolescents' Multisubstance Use Patterns: The Role of Heavy Alcohol and Cigarette Use. Am J Public Health. 1992; 82: 1220 – 1224.
50. Sylbing, G. Cannabis Use among Youth in the Netherlands. Bulletin on Narcotics 1985; Vol. XXXVII; 4: pp 51-60.
51. Schoenbaun M. Do Smokers Understand the Mortality Effects of Smoking? Evidence from the Health and Retirement Survey. Am Jour of Public Health 1997; 87: 755- 759.
52. Greenland KJ. Cigarette Smoking, Attitudes and First Use among Third through Sixth Grade Students: The Bogalusa Heart Study. Am Jour of Public Health 1997; 87: 1345-1348.

53. Aitken PP. Children's Perceptions of Advertisements for Cigarettes. *Soc Sci Med* 1985; Vol 21; 7: 785-797.
54. Kanani S. The Substance Abuse Scenario in the Republic of Kenya. 1994.
55. Jones, S J. Alcohol Policy and Public Health. *The South African J Public Health* 1998; 88: 1018.
56. Moser J. Problems and Programmes related to Alcohol and Drug Dependence in 33 Countries. 1981 (WHO Publication Geneva).
57. Meier KJ. Effect of Cigarette Taxes on Cigarette Consumption 1955- 1994 (US) *Am J Public Health* 1997; 87: 1126- 1130.
58. Perkurinen M. Policy and Consumption of Tobacco. *Soc Sci Med* 1985; Vol. 21; 8: 875-888.
59. Kaiserman MJ. Tobacco Consumption Declining Faster in Canada Than in the US. *Am J Public Health* 1991; 81: 902- 904.
60. Milio N. Health Policy and the Emerging Tobacco Reality. *Soc Sci Med* 1985; Vol. 21; 6: 603- 613.
61. Johnston LD. National Survey Results on Drug Use. Editorial *Am J Public Health* 1997; Vol 87.
62. Reuter P. US National Drug - policy goals. *Am J Public Health* 1995; 85: 1059- 1063.
63. Raymond LM. Alternative Systems in Malaysian Drug Rehabilitation: Organisation and Control in Comparative Perspective. *Soc Sci Med* 1985; Vol. 21; 11: 1289-1296.
64. Karuga JG. Actions Towards a Better Nairobi; Report and Recommendations of the Nairobi City Convention. 1993.
65. Nairobi Provincial Education Office. Annual Report 1998.

66. Lwanga SK. Sample Size Determination in Health Studies – A Practical Manual. WHO Geneva 1991.
67. Weiss S. Sources of alcohol and drug information among Israeli urban adolescents. *J Drug Educ* 1995; 25: 3: 211-222.
68. Ogunde OM. Prevalence of Substance Use among Students in a Kenyan University: A preliminary report. *East African Medical Journal* 1999; Vol. 76: 6: 301-305.
69. Azevedo A. Tobacco Smoking among Portuguese High-school students. *Bulletin of the WHO* 1999; 77: 6.
70. Elder MJ. The report of the Surgeon General: Preventing Tobacco use among Young People. *Amer Journal of Public Health* 1994; 84: 543-547.
71. Sandra WH. Correlates of Cigarette Smoking Initiation. *Am J of Public Health* 1991; 81: 7: 854 – 858.

APPENDIX I: QUESTIONNAIRE

This questionnaire forms part of a Masters of Public Health (MPH) project on substance abuse. The information collected will be treated confidentially and at no time will you be asked to identify yourself by name. Please answer questions as completely and clearly as possible by ticking or writing your responses as appropriate.

SECTION A: IDENTIFICATION.

1. Name of School: _____
Date _____

SECTION B : SOCIODEMOGRAPHIC BACKGROUND.

2. Sex Male _____ Female _____

3. Age (yrs): _____

4. Form : 1.I _____

2.II _____

3.III _____

4.IV _____

5. What is your religion ? 1.Christian _____

2.Muslim _____

3.Hindu _____

4.Other 4.Other (specify) _____

6. Are you a day scholar or boarder ? 1. Day _____ 2. Boarder _____

7. If day scholar who do you usually live with at home ?

1. Parents _____

2. Guardian _____

3. Alone _____

4. Friends _____

5. Others (specify) _____

8. What are your hobbies or which clubs are you a member? _____

SECTION C : KNOWLEDGE ON DRUG ABUSE

9. Which of the following drugs do you know about or have heard of?

1. Alcohol _____

2. Tobacco _____

3. Khat (Miraa) _____

4.Cannabis (Bhang) _____

10. If you know about any of these drugs, what do you know about them?

Alcohol _____

Tobacco _____

Khat (miraa) _____

Cannabis (bhang) _____

11. Which are the various ways of using these drugs? (Tick the appropriate choices)

1.Drinking _____

2.Eating _____

3.Injection _____

4.Sniffing _____

5.Smoking _____

6.Others (specify) _____

12. Are there any effects that these drugs have on students who use them?

1. Yes _____

2.No _____

13. If Yes for Q 12, what are the effects when a student uses the following drugs?

Alcohol _____

Tobacco _____

Khat

(miraa) _____

Cannabis (bhang) _____

14. Can students who have drug related problems get help for their problems?

1. Yes _____ 2. No _____

15. If Yes for Q 14 where could they get this help?

1. At school _____
2. Parents _____
3. Hospital _____
4. Religious leaders _____
5. Others (specify) _____

SECTION D : ATTITUDE ON DRUG ABUSE.

16. Is drug abuse a problem among our high school students in Kenya? (Abuse of alcohol, tobacco, miraa, and cannabis).

1. Yes _____ 2. No _____

17. If Yes for Q 16, how serious is the problem? (Tick only one choice.)

1. Serious _____
2. Moderate _____
3. Mild _____

Do you approve / disapprove of high school students doing the following? (Tick only one choice for each question [18-21])

18. Drinking alcohol 1. Approve _____
 2. Disapprove _____
 3. Strongly disapprove _____

Reasons

19. Smoking tobacco 1. Approve _____
 2. Disapprove _____
 3. Strongly disapprove _____

Reasons

20. Chewing khat (miraa) 1. Approve _____
 2. Disapprove _____
 3. Strongly disapprove _____

Reasons

21. Using bhang 1. Approve _____

- 2. Disapprove _____
- 3. Strongly disapprove _____

Reasons _____

What is your view about the students who use the various drugs? – (alcohol, tobacco, khat, bhang) Tick only one choice for each question [22-25].

22. Antisocial
- 1. Much less than average _____
 - 2. Less than average _____
 - 3. About average _____
 - 4. More than average _____
 - 5. Much more than average _____

23. Criminal / Rebellious
- 1. Much less than average _____
 - 2. Less than average _____
 - 3. About average _____
 - 4. More than average _____
 - 5. Much more than average _____

24. Sensible
- 1. Much less than average _____
 - 2. Less than average _____
 - 3. About average _____
 - 4. More than average _____
 - 5. Much more than average _____

25. Academic performance
- 1. Much Less than average _____
 - 2. less than average _____
 - 3. About average _____
 - 4. More than average _____
 - 5. Much more than average _____

26. There are advertisements in the TV/radio or newspapers/magazines that might affect your attitude towards the use of these drugs. Which of the following choices applies to you?

- 1. Affects my attitude towards drugs positively. (makes me not want to have anything to do with drugs). _____
- 2. Not affected by advertisements. _____
- 3. Affects my attitude towards drugs negatively. (encourages me towards drug taking). _____

SECTION E : PRACTICE OF DRUG ABUSE.

27. Have you ever drunk any alcoholic beverage (beer, wine, spirits)? (more than just a sip).

1. Yes _____ 2. No _____

If No, go to Q 34.

28. Have you drunk any alcoholic beverage in the past 12 months ?

1. Yes _____ 2. No _____

If No, go to Q 35.

29. How old were you when you first had a drink of alcohol? (beer, wine, or spirit).(Tick only one choice).

1. 10 years old or less _____
2. 11-13 years old _____
3. 14-16 years old _____
4. 17-19 years old _____

30. Who introduced you to alcohol use? (Tick only one choice.)

1. Family _____
2. Friends _____
3. Drug pusher /dealer/trafficker _____
4. Don't know _____
5. Other (specify) _____

31. What was the reason for first use of alcohol?

1. Peer pressure _____
2. Experimentation _____
3. Availability _____
4. Curiosity _____
5. Escape _____
6. Others (specify) _____

32. How frequently do you drink alcohol? (Tick only one choice.)

1. Everyday _____
2. Once/ week _____
3. Once/ month _____
4. Others (specify) _____

33. Where do you usually drink the alcohol? (Tick only one choice.)

1. Home _____
2. School _____
3. At a meeting place _____
4. Others (specify) _____

34. For those who have never drunk alcohol. What are your reasons for not drinking alcohol ?

35. For those who have not drunk in the last 12 months . What are the reasons for not drinking ?

36. Have you ever used tobacco?

1. Yes _____ 2. No _____

If No, go to Q 43.

37. Have you used any tobacco in the past 12 months ?

1. Yes _____ 2. No _____

If No, go to Q44.

38. How old were you when you first used tobacco? (Tick only one choice.)

1. 10 years old or less _____
2. 11-13 years old _____
3. 14-16 years old _____
4. 17-19 years old _____

39. Who introduced you to tobacco use ? (tick only one choice) .

1. family _____
2. friends _____
3. Drug pusher/dealer. /trafficker _____
4. don't know _____
5. other (specify) _____

40. What was the reason for first use of tobacco? (Tick all the appropriate choices)

1. Peer pressure _____
2. experimentation _____
3. availability _____
4. Curiosity _____
5. Escape _____

41. How frequently do you use tobacco? (tick only one choice).

1. Everyday _____
2. Once / week _____
3. Once / month _____
4. Others (specify) _____

42. Where do you usually use the tobacco? (tick only one choice).

1. Home
2. School
3. At a meeting place
4. Others

43. For those who have never used tobacco . What are the reasons for not using tobacco ?

44. For those who have not used tobacco in the last 12 months . What are the reasons for not using tobacco? _____

45. Have you **ever chewed** miraa (khat)?
1. Yes _____ 2. No _____

If No, go to Q52.

46. Have you chewed miraa in the past 12 months?
1. Yes _____ 2. No _____

If No, go to Q53.

47. How old were you when you first chewed miraa? (tick only one choice).
1. 10 years old or less _____
2. 11-13 years old _____
3. 14-16 years old _____
4. 17-19 years old _____

MEDICAL LIBRARY
UNIVERSITY OF NAIROM

48. Who introduced you to chewing miraa? (tick only one choice).
1. Family _____
2. Friend _____
3. Drug pusher / dealer/ trafficker _____
4. Don't know _____
5. Other (specify) _____

49. What was/ were the reason/s for first use of miraa? (Tick all the appropriate choices).

1. Peer pressure _____
2. Experimentation _____
3. Availability _____
4. Curiosity _____
5. Escape _____

50. How frequently do you chew miraa? (tick only one choice).
1. Everyday _____
2. Once/ week _____
3. Once/ month _____
4. Others (specify) _____

51. Where do you usually chew miraa? (tick only one choice).
1. Home _____
2. School _____
3. At a meeting place _____
4. Others (specify) _____

52. For those who have never chewed miraa. What are the reasons for not chewing miraa?

53. For those who have not chewed miraa in the last 12 months . What are the reasons for not chewing miraa?

54. Have you ever used cannabis (bhang)?

1. Yes _____ 2.No _____

If No, go to Q61.

55. Have you used bhang in the last 12 months?

1. Yes _____ 2.No _____

If No, go to Q62.

56. How old were you when you first used bhang? (tick only one choice).

1. 10 years old or less _____
2. 11-13 years old _____
3. 14-16 years old _____
4. 17-19 years old _____

57. Who introduced to the use of bhang? (tick only one choice).

1. Family _____
2. Friend _____
3. Drug pusher / dealer/ trafficker _____
4. Don't know _____
5. Other (specify) _____

58. What was/were the reason/s for first use of bhang? (Tick all the appropriate choices).

1. Peer pressure _____
2. Experimentation _____
3. Availability _____
4. Curiosity _____
5. Escape _____

59. How frequently do you use bhang? (tick only one choice).

1. Everyday _____
2. Once/week _____
3. Once/month _____
4. Other (specify) _____

60. Where do you usually use the bhang? (tick only one choice).

1. Home _____
2. School _____
3. At a meeting place _____
4. Other (specify) _____

61. For those who have never used bhang. What are the reasons for not using bhang?

62. For those who have not used bhang for the last 12 months. What are the reasons for stopping to use bhang?

APPENDIX II

Guidelines for Focus Group Discussions.

My name is Dr Ong'ang'o from the department of Community Health of the University of Nairobi. I would like to welcome you all to this participatory group discussion and thank you for all coming. We shall discuss about the knowledge, attitude and practice of drug abuse among our high school students in Kenya. I encourage you to view your ideas freely, because all information collected will be treated as group contribution and this may help us to prevent drug abuse continuing among our children.

With me are and Who will help me record the points as you air them. We also have a radio cassette recorder to record the discussion least any point misses our ears. This will help in the analysis and writing of the report.

Name of assistant moderators ;

1.

2.

Date of FGD Time FGD started

Venue Time FGD ended

Number recruited for FGD Number attended FGD

FGD

Students, Parents, Teachers.

1. I would like us to start discussing about the main drugs of concern that our high students are abusing.

Explore - Major drugs of abuse

- sources of supply
- mode of administration
- awareness of risks involved in drug abuse
- social circumstances leading to drug abuse
- awareness of available help services

2. Attitudes towards drug abuse .

I would like us to talk about your actual feeling about drug abuse among our high school students.

Explore - situation of drug abuse among high school students in Kenya.

- reasons why students use drugs.
- Approval or disapproval of drug use by students and why (focus on alcohol, tobacco, khat, cannabis).
- How are the students who use these drugs viewed by the discussants?
- The relationship of parents or teachers with drug abuser students.
- Is the rehabilitation offered for the drug abusers available and acceptable.

3. I would like us to discuss what we can do to prevent drug abuse from continuing.

Explore - Demand reduction

- Supply reduction
- Rehabilitation.

Conclusion. - It has been a wonderful discussion indeed. I would like to thank you for your contribution which will be helpful in the writing of the research report and in turn help the high school students not to abuse these drugs. Before we end the discussion, is there anyone who would like to make any final comment?

APPENDIX III

Guidelines For In- Depth Interviews.

General introduction to the interview. ---- I am Dr Ong'ang'o, a student at the University of Nairobi, department of Community Health. I am carrying out a research as part of the fulfillment of the masters degree. I would like to welcome you to the interview and thank you for coming. We shall talk about the knowledge, attitude and practice of drug abuse among high school students.

Name of interviewee
Designation of interviewee
Year of appointment to present post
Date of interview
Time started Time ended
Interviewer

1. Drug abuse situation in the school/ area.

Lets talk about the drug situation in your school or locality.

- Explore - Main drugs of abuse
- source of supply
 - social circumstances
 - magnitude of the problem
 - consequences of drug abuse
 - help services availability/ acceptability

2. Views on the drug situation.

Explore - what teachers, students, local leaders and the community approve of or disapprove

3. Prevention .

Of as far as drug abuse is concerned

- Explore - demand reduction
- supply reduction
 - rehabilitation

Conclusion - This has been a wonderful interview indeed. I have certainly learnt a lot from you and I would like to thank you for sparing your time from your busy schedule to attend this interview. Before we end the interview do you have any final comments to make?