Factors Associated With Alcohol Abuse among University of Nairobi Students

By
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H57/63773/2010

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November, 2013
DECLARATION

I, Michelle Njare Hassan certify that this dissertation is my own original work and has not been submitted either wholly or in part to this university or nay other institution for the award of any degree or diploma.

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DEDICATION

This work is dedicated to my parents. They have always been there for me and imparted in me the value of education early in life.
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# Table of Contents

DECLARATION ........................................................................................................... ii
SUPERVISOR’S APPROVALS ............................................................................... iii
ACKNOWLEDGEMENTS ....................................................................................... v
ABSTRACT ............................................................................................................... x
List of Abbreviations and Acronyms ....................................................................... xi
Definition of Operational Terms ............................................................................ xii

Chapter 1: Introduction ......................................................................................... 1
1.1: Background to the Study .............................................................................. 1
1.2 Statement of the Problem ............................................................................. 4
1.4 Justification ..................................................................................................... 6
1.5 Study Objectives ............................................................................................ 7
1.6 Research Questions ....................................................................................... 7
1.7 Limitation of the Study ................................................................................ 7

Chapter 2: Literature Review ................................................................................ 8
2.1 Introduction ..................................................................................................... 8
2.2 Demographic Risk Factors of Alcohol Abuse ............................................. 9
  2.2.1 Age of initiation ..................................................................................... 9
  2.2.2 Gender .................................................................................................. 10
2.3 Psychosocial Factors .................................................................................... 10
  2.3.1 Family History ..................................................................................... 10
  2.3.2 Stress .................................................................................................. 11
  2.3.3 Peer Pressure ....................................................................................... 11
  2.3.4 Binge Drinking .................................................................................... 12
2.4 Signs and Symptoms of alcohol abuse ....................................................... 13
2.5 Symptoms of alcohol dependence ............................................................. 13
2.6 Identification of alcohol related problems ............................................... 13
2.7 Treatment ..................................................................................................... 15
2.8 Consequences of alcohol consumption ................................................... 16
  2.8.1 Academic impairment ........................................................................ 17
  2.8.2 Memory loss ....................................................................................... 17
  2.8.3 Injuries, alcohol poisoning, and other fatalities ................................ 17
List of Tables

Table 1: Socio-demographic characteristics of the respondents.................................30
Table 2: Association between alcohol consumption and socio-demographic status ..........32
Table 3: Age of first drink by gender ........................................................................33
Table 4: Frequency of alcohol consumption 30 days preceding the study ......................34
Table 5: Number of alcoholic drinks consumed during the 30 days preceding the study ........34
Table 6: Frequency of drinking ................................................................................35
Table 7: Heaviness of drinking ..................................................................................36
Table 8: AUDIT Scores of alcohol-related problems ..................................................37
Table 9: Awareness of Risk Factors ..........................................................................43
Table 10: Places respondents got information on alcohol rehabilitation at the University ....46
List of Figures

Figure 1: Respondents who consume Alcohol .................................................................31
Figure 2: Number of standard alcohol drink taken at a sitting by gender .............................36
Figure 3: Sources of alcohol consumed ..............................................................................38
Figure 4: Accessibility of alcohol .......................................................................................39
Figure 5: Reason for alcohol use by gender ........................................................................40
Figure 6: Source of introduction to alcohol intake .............................................................41
Figure 7: Knowledge of alcohol policy ...............................................................................44
Figure 8: Knowledge on where to get alcohol rehabilitation information ............................45
ABSTRACT

University provides students with unfamiliar freedom from direct parental guidance and supervision. Interactions with lecturers, on the other hand, is different from what students are used to in secondary schools. Social and academic challenges in this environment require proper time management, some are unable to handle the independence and resort to alcohol and other substance abuse. Studies on this phenomenon focus mainly on primary and secondary school students and some youth out of school. This study therefore aimed to establish the prevalence and factors associated with alcohol abuse among the University of Nairobi students. A descriptive cross-sectional survey using the Self-Administered modified AUDIT Questionnaire was applied in data collection. A total of 446 students participated in the study with males (63.7%) dominating. Key Informant Interviews among the staff and student leaders were also conducted. Both qualitative and quantitative approaches were used in data analysis, thus there was a mixed model research design approach to data analysis. The analysis of structured items was mainly done using the Statistical Package for Social Sciences (SPSS).

Prevalence rate of alcohol consumption was (63.2%) among the respondents. Association between where they grew up and alcohol consumption was significant (p=0. 002) with more students who grew up in urban setting likely to consume alcohol. Alcohol abuse measured with AUDIT score shows 3.2% of the respondents were in zone 4 highlighting a possible dependency on alcohol. There was low knowledge on the presence of alcohol policy at the university with only 31.4% knowing the existence of the alcohol policy. From the Key Informant interviews, most of the respondents confirm that the female students are increasing their alcohol intake and might be at par with their male colleagues in the near future.

The AUDIT score show likelihood of alcohol dependence among students. There easy access of alcohol by having bars at the campuses, without any time schedule and highly low pricing of alcohol. The university alcohol policy is not in line with the Alcohol Act even though the two were developed in the same year. There is need to review the alcohol policy with regard to that alcohol control act 2010 and ensure the University fraternity adhere to it. Measures need to be put in place to ensure compliance to the policy.
**List of Abbreviations and Acronyms**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADHD</td>
<td>Attention deficit hyperactivity disorder</td>
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<tr>
<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
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<tr>
<td>APA</td>
<td>American Psychiatric Association</td>
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<tr>
<td>AUDIT</td>
<td>Alcohol Use Disorders Identification Test</td>
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<tr>
<td>CAS</td>
<td>College Alcohol Study</td>
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<tr>
<td>CAS</td>
<td>Center on Addiction and Substance Abuse</td>
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<tr>
<td>CDC</td>
<td>Centre for Disease control</td>
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<tr>
<td>HELB</td>
<td>Higher Education Loans Board</td>
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<tr>
<td>HIV</td>
<td>Human Immune deficiency Virus</td>
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<tr>
<td>KII</td>
<td>Key Informant Interviews</td>
</tr>
<tr>
<td>NACADAA</td>
<td>National Campaign against Drug and Alcohol Abuse</td>
</tr>
<tr>
<td>NHTSA</td>
<td>National Highway Traffic Safety Administration</td>
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<tr>
<td>NCD</td>
<td>Non-communicable disease</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually Transmitted Infections</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>UNDOC</td>
<td>United Nations Office on Drugs and Crime</td>
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<tr>
<td>UoN</td>
<td>University of Nairobi</td>
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Definition of Operational Terms

Alcohol is defined as product known as ethyl product, rectified either once or more often, whatever the origin, and shall include synthetic ethyl alcohol, but shall not include methyl alcohol and alcohol completely denatured in accordance with the prescribed formulas. (Government of Kenya Alcoholic drinks control act, 2010)

A drink is defined as a glass of wine, a bottle of beer or a small glass of liquor (Schuckit, 2009).

Alcohol abuse is defined as a condition manifested by recurrent alcohol use despite significant adverse consequences of drinking, such as problems with work, law, health or family life. Alcohol abuse is when one’s drinking leads to problems, but not physical addiction (Diagnostic and Statistical Manual of Mental Disorders, 4th ed., 2000).

Alcohol dependence is defined as a cluster of physiological, behavioral, and cognitive phenomena in which the use of alcohol takes on a much higher priority for a given individual than other behaviors that previously had greater value (WHO, 1992).

Binge drinking is defined as episodic excessive drinking pattern of drinking that brings a person’s blood alcohol concentration (BAC) to 0.08 grams percent or above. This typically happens when men consume 5 or more drinks, and when women consume 4 or more drinks, in about 2 hours. (http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm).

Alcohol policy is defined as the aggregate of measures designed to control the supply of and/or affect the demand for alcoholic beverages in a population (usually national), including education and treatment programmes, alcohol control, harm reduction strategies, etc. (http://www.who.int/substance_abuse/terminology/who_lexicon/en/)
Norms are a standard or pattern, especially of social behavior, that is typical or expected

Hazardous drinking is a pattern of alcohol consumption that increases the risk of harmful consequences for the user or others. (Babor, T., Campbell, R., Room, R. and Saunders, J. (Eds.), 1994)

Harmful use refers to alcohol consumption that results in consequences to physical and mental health. Some would also consider social consequences among the harms caused by alcohol (WHO, 1994)

Zones refers to the various risk level of the audit score with zone I having an audit score of 0-7, Zone 2 audit score of 8-15, Zone III audit score of 16-19 and Zone IV of audit score between 20-40
Chapter 1: Introduction

1.1: Background to the Study

The hazardous and harmful use of alcohol is locally and internationally gaining recognition as a major risk factor for non-communicable diseases, infectious diseases and injury, disability and mortality caused by accidents, violence and crime (WHO, 2011). The harmful use of alcohol results in approximately 2.5 million deaths each year (WHO, 2011). Apart from such health consequences, excessive alcohol consumption has also been linked with various negative social and economic outcomes (Jernigan, 2001). Its economic impacts manifest at both the macro and micro level as countries incur the financial costs of responding to the negative health and social consequences and households struggle to cope as breadwinners, mostly males, divert scarce family resources towards alcohol. Developing countries and their populations suffer the most from such consequences (WHO, 2011).

Globally, 320 000 young people aged 15-29 years die annually, from alcohol-related causes, resulting in 9% of all deaths in that age group (WHO, 2011). While adverse health outcomes from long-term chronic alcohol use may not cause death or disability until later in life, acute health consequences of alcohol use, including intentional and unintentional injuries, are far more common among younger people (WHO, 2011).

Alcohol and drugs abuse has permeated all strata of Kenyan society, with the youth and young adults being the most affected groups. Drugs and substances abuse is a major social problem in Kenya (NACADAA, 2007). At least 13 percent of people from all provinces in Kenya except North Eastern province are current consumers of alcohol (NACADAA, 2007). Half of drug abusers in Kenya are aged between 10-19 years with over 60% residing in urban areas and 21%
in rural areas (UNODC, 2004). The most commonly abused drugs in Kenya are alcohol, tobacco, bhang (marijuana), glue, miraa (khat) and psychotropic drugs (NACADAA, 2004).

Traditional cultural values and discipline of the African society prescribed the circumstances under which drugs and intoxicants could be obtained, used and consumed. Due to social, economic and other changes, censure and control at the family level has been reduced and there is less stigma associated with the use of intoxicants. The education system is one of the most pervasive agents of socialization with regard to drug abuse. The school can either be a risky or a protective environment. Inadequate supervision and easy access to alcohol and drugs in schools, for instance, may act as risk factors for initiation of alcohol abuse while alcohol education offered in the school may increase the child’s self-efficacy to resist initiation of drug abuse (Kibui, 2011).

Studies from different parts of the world have shown that university students have a higher prevalence of alcohol drinking and alcohol-use disorders, than non-college youth (Karama et al, 2007). In addition to the university setting being a unique environment to which a large proportion of young people are exposed en masse, nearly all of the world's future leaders, policymakers, and healthcare providers will have passed through the university system as young people (Karama et al, 2007).

(Lukoye et al, 2010) highlighted the negative effects attributed to alcohol use by the respondents among college students in Eldoret, included quarrels and fights, loss and damage to property, regretted sex, unprotected sex, and medical problem.

Early intervention helps in prevention and management of alcohol related problems. WHO developed AUDIT (Alcohol Use Disorders Identification Test) which is a screening tool for
excessive drinking and brief assessment. The tool provided a framework for intervention to help risky drinkers to reduce or stop drinking. It helps identify alcohol dependence and it is mostly used in hospitals but can also be used in the community setting. The AUDIT tool has a set of 10 questions that look at recent alcohol use, alcohol dependence symptoms, and alcohol-related problems. Each response has a score of 0 to 4. The total score overall is 40. A score of above 20 shows a high likelihood for alcohol dependence.
1.2 Statement of the Problem

University provides students with freedom unfamiliar to many of whom come from direct parental guidance and supervision and strict rules in school. Social and academic challenges in this environment require proper time management and self-discipline. Some students might find it hard to handle the responsibilities expected of them including personal financial management and peer pressure and might lead to alcohol consumption to handle the stress. Judging from articles seen in the national newspapers on students’ behavior, universities are perceived to be encouraging students to drink. The prevailing norms at the university encourage alcohol drinking as it seen as a normal and part of the student sub-culture. The university students, who are mostly over 18 years age (which is the legal drinking age in Kenya) can easily get alcohol from any store and bars in the country. There is an alcohol policy developed by the university however there is no strict guidelines of where the students can drink alcohol in the university. A majority of the students receive HELB (Higher Education Loans Board) which, for most, is the highest amount of money they ever received in their lives with no proper guidance on how to manage it. Some of the students resort to lavish lifestyle including alcohol and other drugs.

The university environment has a significant role in shaping student behavior and it should not be seen as supporting a heavy drinking culture therefore it is essential to measure the objective drinking norms on campus so that appropriate interventions can follow and the impact of these interventions measured.

This study covered the 6 colleges of the University of Nairobi. It focused on module I and module II students of the University of Nairobi. The study also looked at the alcohol policy and its awareness among the students.
1.3 Conceptual Framework

**Distal Factors**

- Outcome

**Psychosocial Factors**
- Peer Pressure
- Available Cash
- Increased access to alcohol
- Poor monitoring Systems

**Economic Factors**

**Contextual Factors**

**Proximate Factors**

- Demographic factors
1.4 Justification

Young adults, between the ages of 18 to 25 years, are in a period of transition in emotional development, educational and vocational activities, living arrangements, and marital and economic status. Some assume adult roles, responsibilities, and social skills. For university students, it is a time when they are no longer under direct parental supervision, face new social and academic challenges and enter an environment wherein use of intoxicating substances, mainly alcohol seems normative (Prendergast, 1994).

This new found freedom and a sense of invulnerability and a strong desire for exploration can lead to the development of alcohol use and abuse (Osgood and Wilson, 1996). Another study found that university students are amongst the highest percentile for binge drinking due to the increases in stress level from school and academia (Lorente, 2003).

In Kenya even with the enactment of the Alcoholic Drinks Act 2010 (GoK, 2010), there was need to find if universities have taken up the mandate to inform the students about the harmful effects of alcohol and also where to get treatment and rehabilitation as stipulated in the act. In America, the universities are required to put their alcohol policy in their website (Faden and Baskin, 2007). In Kenya, however, only a few universities has been able to do that. Prevention of alcohol abuse among the university students would potentially be cost effective and sustainable in the long term. Hence, the need for baseline data on the prevalence of, and risk factors associated with, alcohol abuse among the University students. The information would help in strategic programming and monitoring of progress of any interventions put in place, in response to the Kenya Alcoholic Drinks Act, 2010.
1.5 Study Objectives

General Objective

To establish factors associated with alcohol abuse among University of Nairobi students.

Specific Objectives

1. To establish Socio-demographic characteristics of the respondents
2. To determine the prevalence of harmful alcohol use among the University of Nairobi students
3. To determine major sources of alcoholic drinks consumed by university students
4. To establish student awareness of selected risk factors associated with alcohol abuse
5. To evaluate existing university alcohol policy guidelines against the Kenya Alcoholic Drinks Act, 2010

1.6 Research Questions

What are the factors associated with alcohol abuse among university of Nairobi Students?

1.7 Limitation of the Study

The study was carried out in only one university in Kenya; thus the results therefore may not be generalized to the whole student’s communities in the Kenyan universities.

The study was based on self reporting on alcohol use, therefore dependent on the respondent’s honesty.

Convenience sampling was done and this may have introduced bias and the results shown in the book should be treated cautiously.
Chapter 2: Literature Review

2.1 Introduction

Worldwide per capita consumption of alcoholic beverage in 2005 equaled 6.13 liters of pure alcohol consumed by every person aged 15 years and older with 55% of the population ever taking alcohol (WHO, 2011). In Kenya, the per capita consumption of alcoholic beverage in 2005 was 4.1 inclusive of 2.5 unrecorded alcohol –illicit alcohol (WHO, 2011). The widespread use of alcohol is fuelled by ease of its production process (i.e., a plain process of fermentation achieved by yeast acting on sugar) and multiple daily usage for recreation, curative and religious purposes (Basangwa et al., 2006).

Alcohol is the most commonly abused mood altering substance in Kenya (NACADA, 2004). According to a study by NACADAA (National Campaign Against Drug and Alcohol Abuse Authority), 14 percent of Kenyans aged between 15 and 64 currently use alcohol. The same study found that 8% of children aged 10 to 14 years have used alcohol at least once in the past year (NACADA, 2007).

Research from the United States of America in 2003 has shown that about 5000 young people under the age of 21 die from alcohol-related injuries each year (NHTSA, 2000). An estimated 1600 (32%) of these deaths are a result of homicide fuelled by alcohol. And in 2005, another American study showed that some 700 000 university students are assaulted each year by other students who have been heavily drinking (O’Neill, 2005).

Studies linking youth violence and harmful alcohol use have been conducted in several countries. In Australia, a report released by the government in 2011 stated that young people aged 10–14
years who had engaged in binge drinking in the previous two weeks were five times more likely to have been violent than non-binge drinkers (Bonomo, 2004).

2.2 Demographic Risk Factors of Alcohol Abuse

A number of risk factors for alcohol abuse among young people may be identified. Genetic predisposition may play a role in the development of alcohol dependence (Begleiter & Porjesz, 1999) and in relative insensitivity to the effects of alcohol (Schuckit, 1994). Alcohol problems in some youths may be related to heavy maternal drinking during pregnancy (Baer et al., 2003). Various other stressors and environmental factors, like living with a parent who is an alcohol abuser (Curran et al., 1996) or heavy drinking within the immediate peer group (Arata et al., 2003), may also contribute to alcohol problems in young people.

2.2.1 Age of initiation

Substance use at an early age increases the risk of dependence. The Center on Addiction and Substance Abuse (CASA) reports that the risk of substance abuse increases by almost 500 percent between the ages of 12 and 16 (CASA, 2002). For alcohol, the mean age of initiation is 12.5 years, and 93% of teens who consume alcohol start drinking by the time they are 15 years old. (CASA 2002).

The risk of alcohol dependence is 4 times greater among persons who start drinking before age 15. While alcohol dependence can develop at any age, repeated intoxication at an early age increases the risk of developing an alcohol use disorder (Schuckit, 2000).
2.2.2 Gender

Among adults heavy alcohol use is almost three times more common among men than women and also more common among males in high school than among females. Males with ADHD and/or conduct disorders are more likely to use alcohol than males without these disorders, while females who experience more depression, anxiety, and social avoidance as children are more likely to begin using alcohol as teens than females who do not experience these negative states (Frone, Russell and Cooper, 1993).

2.3 Psychosocial Factors

2.3.1 Family History

According to a study by Roosa and others (1988), children of problem-drinking parents were more at risk of depression, low self-esteem, and heavy drinking than their peers in the general high school population. Parenting practices, particularly support and control, have been linked to development of adolescent drinking, delinquency, and other problem behaviors. The study confirmed that parental support and monitoring are important predictors of adolescent outcomes even after taking into account critical demographic/family factors, including socioeconomic indicators, age, gender, and race of the adolescent, family structure, and family history of alcohol abuse.

According to NACADA (Sunday Nation April 12, 2008) there is a strong link between alcohol/drug abuse by young people and the break-down in family values. In the indigenous society, drunkenness was frowned upon. In today’s setting, binge drinking is becoming an acceptable pastime with parents freeing the children from restrictions that once governed alcohol
consumption. According to the same report, children as young as 10 are not only consuming alcohol, but are suffering the attendant consequences. Stories of children barely in their teens undergoing rehabilitation due to alcohol problems are a cause of concern (NACADA, 2008). The problems certainly reflect a bigger problem and they are a direct product of how children are socialized in relation to alcohol and drug use.

2.3.2 Stress
Another risk factor associated with academic achievement among secondary school students is pressure to perform. Parents and other members of the family place high value on success in school and the competition can often be tough. Young people studying for examinations therefore report the use of central nervous stimulants to keep them awake and alert and this may lead to dependence on these substances (Ebie and Pela, 1981).

2.3.3 Peer Pressure

According to the United Nations (United Nations, 1992), drug users, like other people seek approval for their behavior from their peers whom they attempt to convince to join them in their habit as a way of seeking acceptance. Whether peer pressure has a positive or negative impact depends on the quality of the peer group. Unfortunately, the same peer pressure that acts to keep a group within an accepted code of behavior can also push a susceptible individual down the wrong path. A study carried out in Nairobi secondary schools indicated that the majority of drug users had friends who used drugs (Kariuki 1988)

The available literature on alcohol use (NACADA, 2004) reveals that there are varied reasons as to why the youth engage in alcohol drinking. NACADA (2010) reports further reveals that the most widely used substance by students in Kenya is alcohol, which is divided into six (6) types
depending on the content of each. Spirit (36%), Local brew (Chang’aa 30%, Busaa 15%, others 13%) and beer 6%.

### 2.3.4 Binge Drinking

Binge drinking is the drinking of alcoholic beverages with the primary intention of becoming intoxicated by heavy consumption of alcohol over a short period of time. The consequences of binge drinking can have long-lasting effects on both your health and well-being.

The high levels of binge drinking among young people and the adverse consequences which includes increased risk of alcoholism as an adult and liver disease make binge drinking a major public health issue. Recent research has found that young university binge drinkers who drink four or five drinks on more than 3 occasions in the past 2 weeks are statistically 19 times more likely to develop alcoholism than non-binge drinkers, though the direction of causality remains unclear. Epidemiological studies quantify the seriousness of alcohol-related problems arising from binge drinking, with a growing incidence reported in university-age men over the last 2 years (Courtney and Polich, 2009).

Alcohol-related violence is a visible problem in many high-income countries like the United Kingdom, where it is recorded (WHO, 2010) However, the problem is also found in many developing countries where liquor is often brewed illegally, sales are unregulated and violence statistics are not collected. Without proper surveillance it is impossible to know the true extent of the problem.
2.4 Signs and Symptoms of alcohol abuse

Common signs and symptoms of alcohol abuse include repeatedly neglecting your responsibilities at home, work, or school because of your drinking, using alcohol in situations where it is physically dangerous for example, drinking and driving or mixing alcohol with prescription medication. Getting arrested for disorderly conduct and continuing to drink even when one knows that alcohol use is causing problems in one’s relationships. One of the common signs of alcohol abuse is drinking as a way to relax or release stress. They abuse alcohol as a means to find a ‘way out’ especially from a stressful situation. (American Psychiatric Association, 2006).

2.5 Symptoms of alcohol dependence

Symptoms of alcohol dependence include; Tolerance, withdrawal, taking larger amounts of alcohol or taking alcohol over a longer period than was intended, persistent desire or unsuccessful efforts to cut down or control drinking, missing social, occupational or recreation activities because of alcohol and also alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol (WHO, 1994).

2.6 Identification of alcohol related problems

Early identification of alcohol-related problems is important because these problems are prevalent, pose serious health risks to patients and their families, and are amenable to intervention. Alcohol abuse is roughly twice as common as alcohol dependence. Subjects with
alcohol problems are usually diagnosed only when medical complications are present. It is important therefore for early diagnosis of alcohol abuse (Wiers et al, 2002).

The first signs of heavy drinking may be social problems. The compulsion to drink causes persons to neglect social responsibilities and relationships in favor of drinking. Intoxication may lead to accidents, occasional arrest or job loss. Recovering from drinking can decrease job performance or family involvement. Social problems that indicate alcohol-use disorders include family conflict, separation or divorce, employment difficulties or job loss, arrests and motor vehicle accidents (Burge and Schneider, 1999).

Screening for alcohol consumption among patients in has many benefits. It provides an opportunity to educate patients about low-risk consumption levels and the risks of excessive alcohol use. Information about the amount and frequency of alcohol consumption may inform the diagnosis of the patient’s presenting condition, and it may alert clinicians to the need to advise patients whose alcohol consumption might adversely affect their use of medications and other aspects of their treatment. Screening also offers the opportunity for practitioners to take preventative measures that have proven effective in reducing alcohol-related risks. AUDIT was developed to screen for excessive drinking and in particular to help practitioners identify people who would benefit from reducing or ceasing drinking. The AUDIT helps the practitioner identify whether the person has hazardous (or risky) drinking, harmful drinking, or alcohol dependence. (WHO, 2001). The total AUDIT score reflects the patient’s level of risk related to alcohol. It was found that AUDIT scores in the range of 8-15 represented a medium level of alcohol problems whereas scores of 16 and above represented a high level of alcohol problems (Miller et al, 1992).
Depending on the score of the AUDIT, several interpretations and interventions could be used. Scores between 8 and 15 are most appropriate for simple advice focused on the reduction of hazardous drinking. Scores between 16 and 19 suggest brief counseling and continued monitoring. AUDIT scores of 20 or above clearly warrant further diagnostic evaluation for alcohol dependence (WHO, 2001).

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>AUDIT score</th>
<th>Intervention</th>
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<tbody>
<tr>
<td>Zone I</td>
<td>0-7</td>
<td>Alcohol Education</td>
</tr>
<tr>
<td>Zone II</td>
<td>8-15</td>
<td>Simple Advice</td>
</tr>
<tr>
<td>Zone III</td>
<td>16-19</td>
<td>Simple Advice plus Brief Counseling and Continued Monitoring</td>
</tr>
<tr>
<td>Zone IV</td>
<td>20-40</td>
<td>Referral to Specialist for Diagnostic Evaluation and Treatment</td>
</tr>
</tbody>
</table>

Those at risk for developing alcoholism include; Men who have 15 or more drinks a week; Women who have 12 or more drinks a week and anyone who has five or more drinks per occasion at least once a week. A drink is defined as a glass of wine, a bottle of beer or a small glass of liquor (Schuckit, 2009).

Diagnosis is a necessary step following high positive scoring on the AUDIT, since the instrument does not provide sufficient basis for establishing a management or treatment plan (WHO, 2001).

2.7 Treatment

Treatment depends on the severity of the alcohol problem and the treatment resources that are available at an individual’s higher education institution or in the local community. Treatment
may include: Alcohol detoxification, medications, counseling and support from the family and community (APA, 2006).

As part of their prevention programs, US colleges and universities are required by law to make information about their alcohol policies available to students (Faden and Baskin, 2007). In addition, to be eligible for federal funds, the "Drug Free Schools and Communities Act Amendments of 1989" obligates American colleges and universities to implement a "program to prevent the use of illicit drugs and the abuse of alcohol by students." At a minimum, the program must include the distribution of information to students about (1) laws regulating alcohol and drug use, including minimum legal drinking-age laws, as well as any other standards of conduct that are applicable to students at the institution; (2) the penalties for breaking local, state, and federal laws and campus rules; (3) the health risks associated with the abuse of alcohol; and (4) any counseling, treatment, or rehabilitation programs that are available to students (Faden and Baskin, 2007).

2.8 Consequences of alcohol consumption

Students who engage in risky drinking may experience blackouts (i.e., memory loss during periods of heavy drinking); fatal and nonfatal injuries, including falls, drowning, and automobile crashes; illnesses; missed classes; unprotected sex that could lead to a sexually transmitted disease or an unwanted pregnancy; falling grades and academic failure; an arrest record; accidental death; and death by suicide. In addition, university students who drink to excess may miss opportunities to participate in the social, athletic, and cultural activities that are part of university life (Wood et al., 1997).
2.8.1 Academic impairment

Data from several American national studies indicate that drinking and academic impairments are associated (Engs et al., 1996). In addition to students’ own perceptions that alcohol use has produced academic impairment, several studies have revealed a consistent association between lower self-reported grade averages and higher levels of alcohol consumption (Engs et al., 1996). The negative effect of alcohol consumption was most pronounced on educational attainment in university among those students who ranked as high academic performers during their high school years (Wood et al., 1997).

2.8.2 Memory loss

Memory loss during periods of heavy drinking, a common occurrence among alcoholics, is also reported by a significant number of students who drink. In College Alcohol Study (CAS), 10 percent of non-binge drinkers, 27 percent of occasional binge drinkers, and 54 percent of frequent binge drinkers reported at least one incident in the past year of having forgotten where they were or what they did while drinking (Wechsler et al., 2000). Other studies have also documented blackouts among university students who drink to excess (Buelow and Koeppel, 1995).

2.8.3 Injuries, alcohol poisoning, and other fatalities

Students who misuse alcohol also risk personal injury and even death. Although it is difficult to unambiguously attribute injuries to drinking in some studies, personal injuries to students as a result of heavy drinking have been documented (Wechsler et al., 2000). A study estimates that more than 1,400 university students between the ages of 18 and 24 die each year from alcohol-
related unintentional injuries and 500,000 students between the ages of 18 and 24 sustain unintentional alcohol-related injuries each year (Hingson et al., 2002).

Many university students who drink heavily experience negative short-term health consequences such as hangovers, nausea, and vomiting. Longer-term health consequences of heavy alcohol use may include reduced resistance to infection (Engs and Aldo-Benson, 1995) and increased vulnerability to lifelong alcohol problems and its attendant physical consequences such as cirrhosis of the liver (Vaillant, 1996).

2.8.4 Damage to Others

When university students misuse alcohol, damage to the campus environment or residence hall—including vomit and litter—are common aftereffects. Occasional binge drinkers were almost 3 times more likely and frequent binge drinkers nearly 10 times more likely to report having damaged property when compared with students who do not binge drink (Wechsler et al., 2000). Excessive drinking is also a contributor to fights and interpersonal and sexual violence. It is estimated that each year 600,000 university students aged 18 to 24 are assaulted by another student who has been drinking and 70,000 university students aged 18 to 24 are victims of alcohol-related sexual assault or date rape (Hingson et al., 2002). Sleep loss and interrupted study time on the part of students affected by others’ drinking are common. In CAS, 61 percent of nonbingeing students living on campus said they had experienced sleep or study disturbances due to someone else are drinking (Wechsler et al., 1998). In the same study, 50 percent of nonbingeing students living on campus also said that at least once during the past year they had to “babysit” another student who drank too much (Wechsler et al., 1998).
2.8.5 Alcohol and High-Risk Sexual Behavior

Unintended and unprotected sexual activity is another possible consequence of heavy drinking. In general, studies have shown that university students who drink heavily are more likely to engage in unplanned sexual activity than students who do not drink heavily (Anderson and Mathieu, 1996).

Although research indicates that the relationship between alcohol use and risky sexual behavior is complex, it also suggests that when alcohol is used in the context of a sexual or potential sexual situation such as a date, it is associated with increased sexual risk-taking under some circumstances. Alcohol use appears to be more likely to promote sexual intercourse when the male partner drinks and in situations involving new or occasional sex partners. Drinking prior to intercourse has been consistently related to casual sex as well as to a failure to discuss risk-related topics before having sex (Cooper, 2002). In a Kenya operations research study, 60% of individuals who consumed alcohol had multiple sexual partners (Mackenzie & Karusa, 2007).

Among the youth, alcohol and drug use may lead to early sexual debut, unprotected sexual intercourse, and multiple sexual partners as well as putting young people at risk of contracting sexually transmitted infections (STIs), unintended pregnancy, and sexual violence (Kaiser Family Foundation, 2002).

A study by Ayisi (2000) in Kisumu, the third largest city in Kenya, found that after controlling for confounding variables, women who drank alcohol were 60% more likely to be HIV-positive than women who did not drink.

In a WHO (2005) study, it was noted that in Kenya, alcohol use was believed to reduce fears connected to sex and encouraged risky sex, and to provide extra power for sex while, in South
Africa, it was noted that alcohol use and sex were a “match made in heaven” that is, they are inseparable. In Mexico, young people and homosexual men used alcohol to build courage to approach a possible sexual contact (WHO 2005). Therefore, alcohol abuse may actually be seen as a proximate determinant for HIV infection.

2.8.6 Alcohol and Physical and Sexual Aggression

Research shows that alcohol consumption is associated with aggressive behavior (Chermack and Giancola, 1997). Although there is little research on this issue as it affects university students specifically, studies show that a substantial proportion of young adults engage in fighting while intoxicated (Wechsler et al., 1995). Alcohol-related aggression is a serious problem on university campuses, but it is not clear whether alcohol promotes aggressive behavior in some people or whether individuals who are more aggressive tend to drink more (Giancola, 2002).

Alcohol use has been linked to physical violence, which is a proximate determinant of sexual abuse. In a recent study in northern Tanzania women who abused alcohol were likely to also be sexually and physically abused. Further, the women were more likely to report STI symptoms and multiple sexual partners (Ghebremichael et al., 2009). In this study alcohol abuse was found to be indirectly associated with STIs through association with multiple sexual partners. (NACADAA, 2010)
Chapter 3: Study Methodology

3.1 Study Design

This was a descriptive, cross sectional study utilizing both qualitative and quantitative methods of data collection. The quantitative part consisted of issuing self-administered questionnaires to the students to assess alcohol. This was conducted between June and July 2012. The qualitative part included Key Informant Interviews with selected university staff including student leaders, wardens and the security offices.

3.2 Variables

3.2.1 Dependent Variable

Alcohol abuse among University of Nairobi students

3.2.2 Independent Variables

Socio-demographic factors: age, sex, socio-economic

Environmental factors: family, Binge drinking

Access to alcohol

3.3 Study Site

University of Nairobi started with the establishment of the Royal Technical College, in 1958. It changed to a constituent college of University of East Africa, the other being Makerere and Dar es salaam. In 1970 the UON became a registered university and was the only public university in Kenya until 1980’s when Kenyatta University was established and later on Moi University. In view of the rapid expansion and complexities in administration, the University underwent a
major restructuring in 1983 resulting in decentralization of the administration, by creation of six (6) colleges headed by principals. The colleges include College of Agriculture & Veterinary Sciences located at Upper Kabete, College of Architecture & Engineering located at Main campus, College of Biological & Physical Sciences located at Chiromo Campus, College of Education & External Studies located at Kikuyu Campus, College of Health Sciences located at Kenyatta National Hospital and College of Humanities and Social sciences which is the biggest college with students spread across Lower Kabete, Parklands Campus whose main focus is Law and the Main campus where Bachelor of Arts students are based.

University of Nairobi has over 36,000 students with 7,000 being post graduate. They are both non-residents and residents students with majority being non-residents due to the module II programmes.

The study was conducted at the University of Nairobi and only focused on the six colleges.

University of Nairobi offers an ideal study location since its colleges are situated in different parts of Nairobi with diverse college sub-culture.

3.4 Study population

The study population was the undergraduate students; both residents and non-residents. This was an ideal group because they spend most of their time in their respective colleges, therefore are accessible. The students were sampled from the 6 colleges to give a representative sample.

Among the key informants identified to be part of the study include key officials in the university to help further understand the situation in the university. Part of the officials to be interviewed includes security officers, halls of residence wardens and the student leaders.
3.4.1 Inclusion Criteria

- Undergraduate student
- Written informed consent

3.4.2 Exclusion Criteria

- Post graduate student
- Those who decline to participate

3.5 Sampling: Sampling Procedure, Sample Size determination

3.5.1 Sample Size Determination

The sample size was determined applying the following formula (Fisher et al, 1998).

\[ n = \frac{z^2p(1-p)}{d^2} \]

Where:

- \( n \) is the sample size.
- \( z \) is the standard normal deviation at 95% confidence level.
- \( p \) is the proportion in the target population i.e. prevalence of alcohol consumption at 51.9% (Lukoye, 2010)
- \( d \) is the target margin of error put at 0.05.

\[ = \frac{1.96^2 \times 0.52(1-0.52)}{0.05^2} \]

\[ = 384 \]
3.5.2 Sampling
The sample size was 384 students, to cater for non response 10% was added making the individual sample size to be 422.

The 422 respondents were selected proportional to the populations’ sizes of the college.

Following preliminary enquiries with the administration of the University of Nairobi, the researcher established the average number of undergraduate students in each college.

The number of respondents recruited per college was as indicated below:

<table>
<thead>
<tr>
<th>College</th>
<th>Respondents</th>
<th>Estimated number of enrolment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture &amp; Veterinary Sciences</td>
<td>44</td>
<td>694</td>
</tr>
<tr>
<td>Architecture &amp; Engineering</td>
<td>67</td>
<td>1495</td>
</tr>
<tr>
<td>Biological &amp; Physical Sciences</td>
<td>70</td>
<td>3271</td>
</tr>
<tr>
<td>Education &amp; External Studies</td>
<td>31</td>
<td>3206</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>63</td>
<td>2971</td>
</tr>
<tr>
<td>Humanities and Social sciences</td>
<td>171</td>
<td>18482</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>446</strong></td>
<td></td>
</tr>
</tbody>
</table>

Estimated number of enrolment (UON, 2010)
The number of the respondents in each college was allocated proportionally using the estimated number of undergraduate students. In cases where most students were off session, the number was adjusted to cater for it. The selected number of students were sampled conveniently in each college.

In order to supplement and bear out results arising from the survey, key informant interviews were conducted. Purposive sampling procedure was applied in the selection of the four key informants. The eligible key informants were selected since they were directly involved in student day to day life. They comprised of the student leaders, security offices and hall wardens.

3.6 Data Collection

The study used both quantitative and qualitative methods of data collection and analysis.

A pretest was carried out in May 2012 at Kenya Polytechnic College a subsidiary college to the University of Nairobi. Kenya Polytechnic was selected since it is the nearest college to the University and has students who are the same age as University students, therefore they are facing the same social environment as the main study population. Following the pilot study, the questionnaire was adjusted accordingly before embarking on the definitive study.

Three research assistants were recruited to assist with the data collection. They were trained on interviewing techniques (including ethical considerations) prior to data collection. They were consistently monitored by the principle investigator during data collection period.

The researchers strategically went to places where the students hang out. This included University cafeteria, other eating places and the library. The researchers introduced themselves to the respondents and acknowledged their participation in a research study to establish factors associated with alcohol abuse among the students. When the participant agreed to participate
they were instructed that completing the questionnaire was voluntary and that they would not be identified by participating in the study. Once informed consent was obtained and they signed the consent form, then they were allowed to continue to fill in the study questionnaire.

The principal investigator was personally involved in conducting the Key Informant interviews. The interviewees were sought out purposively. The Key informants were approached and requested if they would be willing to participate in the study. For those who agreed, an informed consent and permission to record the interviews was obtained and a preamble stating the current issue was explained to the informants. An interview guide was used in the discussion. The discussion was held in private places such as their offices for ease of recording and also to ensure confidentiality. The themes tested included access to alcohol and also alcohol policy at the university.

3.7 Data Processing and Analysis

The completed questionnaires were checked daily to ensure each question had been filled out correctly and that there were no gaps. The questionnaires were then numbered and coded for ease of handling.

Data from structured questionnaires were entered, checked, cleaned and analyzed using SPSS version 17.

Univariate analysis was performed in order to obtain descriptive statistics. Proportions, means and standard deviations were determined during the analysis. The results are presented in form of tables and charts. Bivariate analysis was also performed in order to examine associations between the independent variables and alcohol abuse. The T-test was used to calculate statistical
values for continuous variables whereas chi-square test was used for categorical variables in case of any relationship.

Measures of association were considered statistically significant when p value will be equal to or less than 0.05.

AUDIT comprises ten questions addressing four areas: alcohol intake; abnormal drinking behavior and alcohol dependence; the link between alcohol consumption and the detection of psychological effect; and alcohol-related problems. This was between question 13 and 22. Scores from the ten individual AUDIT questions were summed to give overall scores ranging from 0-40.

The researcher transcribed the information got from the Key informant interviews. The data was then manually analyzed in relation to themes and the objectives of the study. Some of the themes included, availability and access to alcohol, the social environment of the university, differences between the male and female students with relation to alcohol and the alcohol policy uses and challenges at the university.

3.8 Minimization of Errors and Biases

The potential errors and biases were minimized by:

1. Training research assistants so as to make sure that they understood the questions well
2. Pre-testing the questionnaires and any ambiguity corrected before actual collection of data through pilot study
3. Having the participants understand the informed consent fully and highlighting especially on confidentiality.
3.9 Ethical Considerations including ethical clearance

The following procedures were carried out to ensure that no harm comes to the participants of this study as a result of their participation.

1. Approval. The proposal for this study was reviewed and approved by the Kenyatta National Hospital/ University of Nairobi Ethics and Research Committee before collection of data.

2. Approval from the University. The investigator obtained approval of the university administration to collect data before conducting the study.

3. Informed Consent: All participants were informed of the purpose of the study and what it involved of them through the Informed Consent Form that was affixed to the questionnaire. In this form, participants were given the option to opt out of completing the questionnaire.

4. Confidentiality. The investigator undertook to treat the information provided during the study with utmost confidentiality. The identities of the participants were not captured, and only a code that is supplied by the participant was used as an identifier.

5. Potential harm and benefits: Participants were assured that no harm will come to them as a result of participating in this study.
Chapter 4: Results

4.1 Socio-demographic characteristics

A total of 446 students participated in the study. Majority of the students who participated were male (n = 284, 63.7%) as compared to the females (n = 162, 36.3%). There were more male students being represented in College of Agriculture and Veterinary, College of Architecture and Engineering and College of Biological and Physical Sciences with more than 70% (n = 139) as shown in table 1.

Most of the respondents were from the second year through fourth year, with majority of them being third year (n = 167, 37.4%). The study was only able to reach 7.4% of first year students overall since most of them were in recess. There were only 9 (2.0%) of fifth year this is mainly because most courses at the University are four year courses.

Most of the respondents were between the age of 20 and 25 years as shown in table 1. (n = 408, 90%). 43.9% (n= 196) of the respondents were between the age of 22-23 years and 35.7% (159) being between the ages of 20-21 years.

When asked about the family structure, 349 (78.3%) of the respondents live with both their parents with the male respondents living with both parents more. 16.4% (73) live with their mother alone and 2% (9) with their father and 2.5% (11) live with either their Aunt.
### Table 1: Socio-demographic characteristics of the respondents

<table>
<thead>
<tr>
<th></th>
<th>Male (n=284)</th>
<th>Female (n=162)</th>
<th>Total (N=446)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>College</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture and Veterinary</td>
<td>31 (10.9%)</td>
<td>13 (8.0%)</td>
<td>44 (9.9%)</td>
</tr>
<tr>
<td>Architecture and Engineering</td>
<td>53 (18.7%)</td>
<td>14 (18.6%)</td>
<td>67 (15.0%)</td>
</tr>
<tr>
<td>Biological &amp; Physical Science</td>
<td>55 (19.4%)</td>
<td>15 (9.3%)</td>
<td>70 (15.7%)</td>
</tr>
<tr>
<td>Education and External Studies</td>
<td>20 (7.0%)</td>
<td>11 (6.8%)</td>
<td>31 (7.0%)</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>35 (12.3%)</td>
<td>28 (17.3%)</td>
<td>63 (14.1%)</td>
</tr>
<tr>
<td>Humanities and Social Sciences</td>
<td>90 (31.7%)</td>
<td>81 (50.0%)</td>
<td>171 (38.3%)</td>
</tr>
<tr>
<td><strong>Age of respondent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 19 years</td>
<td>14 (4.9%)</td>
<td>9 (5.6%)</td>
<td>23 (5.2%)</td>
</tr>
<tr>
<td>20-21 years</td>
<td>74 (26.1%)</td>
<td>85 (52.5%)</td>
<td>159 (35.7%)</td>
</tr>
<tr>
<td>22-23 years</td>
<td>141 (49.6%)</td>
<td>55 (34%)</td>
<td>196 (43.9%)</td>
</tr>
<tr>
<td>24-25 years</td>
<td>45 (15.8%)</td>
<td>8 (4.9%)</td>
<td>53 (11.9%)</td>
</tr>
<tr>
<td>26 years and above</td>
<td>10 (3.5%)</td>
<td>5 (3.1%)</td>
<td>15 (3.4%)</td>
</tr>
<tr>
<td><strong>Year of study</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First year</td>
<td>21 (7.4%)</td>
<td>12 (7.4%)</td>
<td>33 (7.4%)</td>
</tr>
<tr>
<td>Second year</td>
<td>52 (18.3%)</td>
<td>54 (33.3%)</td>
<td>106 (23.8%)</td>
</tr>
<tr>
<td>Third year</td>
<td>109 (38.4%)</td>
<td>58 (35.8%)</td>
<td>167 (37.4%)</td>
</tr>
<tr>
<td>Fourth year</td>
<td>94 (33.1%)</td>
<td>37 (22.8%)</td>
<td>131 (29.4%)</td>
</tr>
<tr>
<td>Fifth year</td>
<td>8 (2.8%)</td>
<td>1 (0.6%)</td>
<td>9 (2.0%)</td>
</tr>
<tr>
<td><strong>Grew Up In</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>150 (52.8%)</td>
<td>102 (63%)</td>
<td>252 (56.5%)</td>
</tr>
<tr>
<td>Rural</td>
<td>134 (47.2%)</td>
<td>60 (37%)</td>
<td>194 (43.5%)</td>
</tr>
<tr>
<td><strong>Family structure</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mum and Dad</td>
<td>228 (80.3%)</td>
<td>121 (74.7%)</td>
<td>349 (78.3%)</td>
</tr>
<tr>
<td>Single Mum</td>
<td>41 (14.4%)</td>
<td>32 (19.8%)</td>
<td>73 (16.4%)</td>
</tr>
<tr>
<td>Single Dad</td>
<td>3 (1.1%)</td>
<td>6 (3.7%)</td>
<td>9 (2.0%)</td>
</tr>
<tr>
<td>Foster Parents</td>
<td>3 (1.1%)</td>
<td>1 (0.6%)</td>
<td>4 (0.9%)</td>
</tr>
<tr>
<td>Aunt/Uncle</td>
<td>9 (3.2%)</td>
<td>2 (1.2%)</td>
<td>11 (2.5%)</td>
</tr>
<tr>
<td><strong>Residence</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Campus</td>
<td>191 (67.3%)</td>
<td>90 (55.6%)</td>
<td>281 (63%)</td>
</tr>
<tr>
<td>Off Campus</td>
<td>93 (32.7%)</td>
<td>72 (44.4%)</td>
<td>165 (37%)</td>
</tr>
<tr>
<td><strong>Part time work</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>65 (22.9%)</td>
<td>30 (18.5%)</td>
<td>95 (21.3%)</td>
</tr>
<tr>
<td>No</td>
<td>219 (77.1%)</td>
<td>132 (81.5%)</td>
<td>351 (78.7%)</td>
</tr>
</tbody>
</table>
About 281 (63%) of the respondents live on campus with majority being males (67.3% males Vs 55.6% female).

When asked where the area one grew up in 252 (56.5%) reported that they live in Urban area while 194 (43.5%) live in the rural areas. There were more females who live in the urban area as compared to rural area (63% vs. 37%).

4.2 Alcohol Consumption

The majority of the respondents, 282 (63.2%) reported to have taken alcohol (figure 1).

Table 2 shows the association between taking alcohol and socio-demographic characteristics.
Table 2: Association between alcohol consumption and socio-demographic status

<table>
<thead>
<tr>
<th>Variable</th>
<th>Consumed Alcohol (N = 282)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>College</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture and Veterinary Services</td>
<td>26 (59.1%)</td>
<td></td>
</tr>
<tr>
<td>Architecture and Engineering</td>
<td>49 (73.1%)</td>
<td>0.131</td>
</tr>
<tr>
<td>Biological &amp; Physical science</td>
<td>49 (70.0%)</td>
<td></td>
</tr>
<tr>
<td>Education and External studies</td>
<td>15 (48.4%)</td>
<td></td>
</tr>
<tr>
<td>Health Sciences</td>
<td>36 (57.1%)</td>
<td></td>
</tr>
<tr>
<td>Humanities and Social sciences</td>
<td>107 (62.6%)</td>
<td></td>
</tr>
<tr>
<td><strong>Year of Study</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First year</td>
<td>20 (60.6%)</td>
<td></td>
</tr>
<tr>
<td>Second year</td>
<td>65 (61.3%)</td>
<td></td>
</tr>
<tr>
<td>Third year</td>
<td>104 (62.3%)</td>
<td>0.567</td>
</tr>
<tr>
<td>Fourth year</td>
<td>89 (67.9%)</td>
<td></td>
</tr>
<tr>
<td>Fifth year</td>
<td>4 (44.4%)</td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>185 (65.1%)</td>
<td>0.157</td>
</tr>
<tr>
<td>Female</td>
<td>97 (59.9%)</td>
<td></td>
</tr>
<tr>
<td><strong>Residence Setting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>175 (69.4%)</td>
<td>0.002</td>
</tr>
<tr>
<td>Rural</td>
<td>107 (55.2%)</td>
<td></td>
</tr>
<tr>
<td><strong>Hostel</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Campus</td>
<td>178 (63.3%)</td>
<td>0.947</td>
</tr>
<tr>
<td>Off Campus</td>
<td>104 (63.0%)</td>
<td></td>
</tr>
<tr>
<td><strong>Part time Work</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>75 (78.9%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>No</td>
<td>207 (59.0%)</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td>0.367</td>
</tr>
</tbody>
</table>

There were no significant differences between use of alcohol and college, age, year of study, gender or if they live on campus or not. However, there was a significant difference between use of alcohol and residence setting and part time work. About 175 (69.4%) of the respondents who lived in urban setting consumed alcohol (p value=0.002) whereas 75 (78.9%) of the respondents who work consume alcohol (p=0.0001) showing that an urban dweller and students who work part time are more likely to consume alcohol.
Looking at the association between gender and alcohol consumption, there was no significant differences. However, this might change in the few years as one of the student leader stated. The male students take more alcohol bought by students campaigning for various positions so that they could vote for them and also for encouraging chaos. This has been a phenomenon especially during the SONU elections.

“Male students drink more alcohol than the female students however the female students are increasing their drinking and in a few years might be at par with the male students. Main reasons for male taking more include their ego and universities culture which encourage men to drink more”. (4th year male student representative)

Asked the age they first took alcohol, 209 (46.9%) respondents highlighted that they first took alcohol at the age of 16 years and older an average of 45.42 % males and 49.38% females. 164 (36.8%) have never taken alcohol other than a few sips. 45 (10.1%) respondents took their first alcohol at the age of 13 and below with 21 (4.7%) taking between the age 8 or 9 years. More males (9.15%) took the first drink at age of 14 or 15 years compared to females (1.23%) at that age.

Table 3: Age of first drink by gender

<table>
<thead>
<tr>
<th>Age of first drink</th>
<th>Male (n=284)</th>
<th>Female (n=162)</th>
<th>Total (N=446)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never had a drink of alcohol other than a few sips</td>
<td>99 (34.86%)</td>
<td>65 (40.12%)</td>
<td>164 (36.77%)</td>
</tr>
<tr>
<td>7 years old or younger</td>
<td>4 (1.41%)</td>
<td>3 (1.85%)</td>
<td>7 (1.57%)</td>
</tr>
<tr>
<td>8 or 9 years old</td>
<td>15 (5.28%)</td>
<td>6 (3.70%)</td>
<td>21 (4.71%)</td>
</tr>
<tr>
<td>10 or 11 years old</td>
<td>2 (0.70%)</td>
<td>2 (1.23%)</td>
<td>4 (0.9%)</td>
</tr>
<tr>
<td>12 or 13 years old</td>
<td>9 (3.17%)</td>
<td>4 (2.47%)</td>
<td>13 (2.91%)</td>
</tr>
<tr>
<td>14 or 15 years old</td>
<td>26 (9.15%)</td>
<td>2 (1.23%)</td>
<td>28 (6.28%)</td>
</tr>
<tr>
<td>16 years old or older</td>
<td>129 (45.42%)</td>
<td>80 (49.38%)</td>
<td>209 (46.86%)</td>
</tr>
</tbody>
</table>
Among the respondents taking alcohol, 55 (19.5%) have not taken a drink in the last 30 days preceding the study. Ninety six (96, 34%) took alcohol between one or two days with more females 38.15% and 61 (21.6%) took alcohol between three to five days in the month. Females took more alcohol between 10 to 19 days compared to the male respondents (5.4% & 2.2%). Seven (2.5%) students who were all males took alcohol all the 30 days preceding the study showing they are daily drinkers as shown in table 4.

**Table 4: Frequency of alcohol consumption 30 days preceding the study**

<table>
<thead>
<tr>
<th></th>
<th>Male (n=185)</th>
<th>Female (n=97)</th>
<th>Total (N=282)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 days</td>
<td>37 (20.0%)</td>
<td>18 (18.6%)</td>
<td>55 (19.5%)</td>
</tr>
<tr>
<td>1 or 2 days</td>
<td>59 (31.9%)</td>
<td>37 (38.15)</td>
<td>96 (34%)</td>
</tr>
<tr>
<td>3 to 5 days</td>
<td>46 (24.9%)</td>
<td>15 (15.5%)</td>
<td>61 (21.6%)</td>
</tr>
<tr>
<td>6 to 9 days</td>
<td>22 (11.9%)</td>
<td>13 (13.4%)</td>
<td>35 (12.4%)</td>
</tr>
<tr>
<td>10 to 19 days</td>
<td>10 (5.4%)</td>
<td>9 (9.3%)</td>
<td>19 (6.7%)</td>
</tr>
<tr>
<td>20 to 29 days</td>
<td>4 (2.2%)</td>
<td>5 (5.2%)</td>
<td>9 (3.2%)</td>
</tr>
<tr>
<td>All 30 days</td>
<td>7 (3.8%)</td>
<td>0 (0%)</td>
<td>7 (2.5%)</td>
</tr>
</tbody>
</table>

**Table 5: Number of alcoholic drinks consumed during the 30 days preceding the study**

<table>
<thead>
<tr>
<th></th>
<th>Male (n=185)</th>
<th>Female (n=97)</th>
<th>Total (N=282)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I did not drink alcohol during the past 30 days</td>
<td>37 (20%)</td>
<td>18 (18.6%)</td>
<td>55 (19.5%)</td>
</tr>
<tr>
<td>less than one drink</td>
<td>8 (4.3%)</td>
<td>9 (9.3%)</td>
<td>17 (6.0%)</td>
</tr>
<tr>
<td>1 drink</td>
<td>17 (9.2%)</td>
<td>14 (14.4%)</td>
<td>31 (11%)</td>
</tr>
<tr>
<td>2 drinks</td>
<td>37 (20%)</td>
<td>12 (12.4%)</td>
<td>49 (17.4%)</td>
</tr>
<tr>
<td>3 drinks</td>
<td>35 (18.9%)</td>
<td>20 (20.6%)</td>
<td>55 (19.5%)</td>
</tr>
<tr>
<td>4 drinks</td>
<td>25 (13.5%)</td>
<td>10 (10.3%)</td>
<td>35 (12.4%)</td>
</tr>
<tr>
<td>5 or more drinks</td>
<td>26 (14.1%)</td>
<td>14 (14.4%)</td>
<td>40 (14.2%)</td>
</tr>
</tbody>
</table>
In the study, 75 (26.6%) of the respondent took 4 or more drinks on the days they took alcohol during the 30 days preceding the study (4 drinks=12.4% and 5 or more drinks=14.2%). 55 (19.5%) took 3 drinks (Table 5). There were no significant differences between the percentage of male and female students who took more than four drinks per sitting. This shows there are cases of binge drinking at the university. A security guard highlighted there is a high frequency of students taking alcohol during the first days of campus since they have HELB loans and at the end due to stress of the exams.

“Most students take alcohol at the beginning of the semester and at the end. This is mainly due to having money at the beginning of the semester and also during the end of semester they drink to relieve stress of exams and also to celebrate the end of exams” (Middle aged security guard).

On further analysis of the respondent who drank alcohol, 139 (49.3%) reportedly drank monthly or less frequently, and 35 (12.4%) drank 2-3 times a week. 11 (3.9%) drank 5 or times a week as shown in table 7. From the table it shows that more who drank 2-4 times a month or less frequently are more likely social drinkers.

Table 6: Frequency of drinking

<table>
<thead>
<tr>
<th>Frequency of drinking</th>
<th>Frequency (n=282)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once a month or less</td>
<td>139</td>
<td>49.3</td>
</tr>
<tr>
<td>2-4 times a month</td>
<td>97</td>
<td>34.4</td>
</tr>
<tr>
<td>2-3 times a week</td>
<td>35</td>
<td>12.4</td>
</tr>
<tr>
<td>5 or more times a week</td>
<td>11</td>
<td>3.9</td>
</tr>
</tbody>
</table>
Table 7: Heaviness of drinking

<table>
<thead>
<tr>
<th>Standard drinks at a sitting</th>
<th>Frequency (n=282)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 or 2</td>
<td>162</td>
<td>57.4</td>
</tr>
<tr>
<td>3 or 4</td>
<td>80</td>
<td>28.4</td>
</tr>
<tr>
<td>5 or 6</td>
<td>29</td>
<td>10.3</td>
</tr>
<tr>
<td>7 to 9</td>
<td>8</td>
<td>2.8</td>
</tr>
<tr>
<td>10 or more</td>
<td>3</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Response to heaviness of drinking, most of the respondent who drank took one or two drinks per sitting (57.4%) as shown in table 8. About 29 (10.3%) took 5 or 6 drinks at a sitting while 8 (2.8%) take 7 to 9 drinks at a sitting. One percent (n = 3) take 10 or more drinks at a sitting indicating heavy drinking.

Figure 2: Number of standard alcohol drink taken at a sitting by gender
Males were more likely to drink more at a sitting compared to the females with 20 (69%) of the males taking 5 or 6 drinks. Among the respondents taking 10 drinks or more, 2 (66.7%) of them were males as shown in figure 2.

The overall AUDIT scores across the respondents who have ever taken alcohol all respondents’ show 124 respondents were in Zone 1 (44%) showing low risk drinking or abstinence. Zone 2 had 124 (44%) of the respondents indicating medical level of alcohol problem. Zone 3 had 25 (8.6%) representing a high level of alcohol problem or hazardous problem. Zone 4 had 9 respondents (3.2%), highlights a possible dependant and warrants further diagnostic evaluation. This is shown in table 8.

**Table 8: AUDIT Scores of alcohol-related problems**

<table>
<thead>
<tr>
<th>Zones</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1 (0-7)</td>
<td>124</td>
<td>44.0</td>
</tr>
<tr>
<td>Zone 2 (8-15)</td>
<td>124</td>
<td>44.0</td>
</tr>
<tr>
<td>Zone 3 (16-19)</td>
<td>25</td>
<td>8.9</td>
</tr>
<tr>
<td>Zone 4 (20-40)</td>
<td>9</td>
<td>3.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>282</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
4.3 Sources of alcoholic drinks

Figure 3: Sources of alcohol consumed

Beer, Lager or Stout was the preferred drink among the male respondents with 122 (65.9%) of them stating it. 55 (56.7%) of the female respondents who drink preferred to drink wine. There was no difference between the gender while taking spirits since 24.9% of the males took and 22.7% of the females who drink, spirits is their preferred choice. (0.4%) preferred Mnazi and another 1 (0.4%) noted that they liked Muratina. The two local drinks were included in the study as it is recognized that more Kenyans take it (Figure 3).

Among the student leaders interviewed, the following was highlighted:

“*The students take mostly a combination of beer and spirits and especially cheap spirits like Blue moon because they are cheap and the students get high quickly*”(4th year male student leader)

“*Most students drink spirits like Blue moon and Kibao. This is because they are cheap and have a higher percentage of alcohol*” (3rd year male student leader)
More than half the respondents (51.3%, n = 203) highlighted they usually get alcohol from the bars (Figure 4). This was defined as bars outside of campus. About 81 (20.4%) access alcohol at the College, this was also confirmed during the data collection where it was noted that the tuck shops at the universities sell alcohol and have the EABL standard fridge to store the alcohol. Five (5) of the campuses also have bars. About 41 (10.1%) usually took alcohol at home and 68 (17.2%) got alcohol from their friends while 4 (1%) respondents bought alcohol from the supermarket. This may be due to some students who live off campus and might need alcohol for parties therefore buy alcohol at the supermarket.

The security guard underscored that:

“It is good to have bars at the university since it reduces the number of students going out into town to drink and therefore reduces security issues. However, it is bad since it encourages overindulgence of alcohol since the alcohol is easily accessible. When the students take a lot of
alcohol it also causes destruction of property at the university due to fighting each other and rioting” (middle aged male security guard)

This was confirmed by one of the student leader who stated that:

“It is easier for Lower Kabete and Upper Kabete to access cheaper alcohol since they are near the villages in the area. Students who do evening classes are usually free during the day hence are more likely to take more likely. Prices at the campus bar are usually cheaper than other places”. (4th year male student leader)

4.4 Reasons for alcohol use

Figure 5: Reason for alcohol use by gender

Reason given for alcohol use include: for fun which was highest for both the males and females at 78.9% and 89.7% respectively. There was a difference between gender with 7.0% of the males saying they drink because of boredom compared to 1% of the female respondents as shown in figure 5.

Peer pressure was highlighted as the main reason for students taking alcohol among the key informants interviewed. This may be because most of the students find new found freedom and a sense of invulnerability and a strong desire for exploration at the university.

Among the reasons given by the key informants include:
“Peer pressure, boredom and lack of mentorship. In high schools there were rules that needed to be followed however in campus there is extra freedom and no rules this makes the students take more alcohol” (middle aged male security guard)

“Peer pressure is main reason why students take alcohol. In first year most of the students do not drink but by the time they are in fourth year they drink a lot” (middle aged male security guard)

**Figure 6: Source of introduction to alcohol intake**

Among the 282 respondents who admitted to taking alcohol, 137 (48.6%) were introduced by a friend (28.7% by friend from school and 19.9% by friend from home). Forty percent (40.1%, n = 113) were curious and tried alcohol on their own. While 15 (5.3%) were introduced by their parent and 12 (4.3%) by their sibling. 5 (1.8%) were introduced by their cousin to alcohol. This is shown in figure 6.

**4.5 Awareness of Risk Factors and Knowledge on alcohol**

To test knowledge of effects of alcohol among the respondents, a series of questions were asked. Among the respondents (n = 282) who take alcohol 87.6% said it was true that alcohol is a mood altering stimulant same as 82.3% of the respondents who do not take alcohol as shown in table 9.
They answered wrongly as alcohol is a mood altering drug that depresses bodily functions and not a stimulant. 88.7% of the respondents taking alcohol and 84.8 of the respondents taking alcohol answered correctly that the effects of alcohol vary according to individual as it are dependent on sex, weight, metabolism and presence of food in the stomach.

“Women respond to alcohol differently from men”. This is a correct fact since they respond more quickly to alcohol due to their smaller body size and body fat distribution and due to increased hormonal changes. About 186 (66%) agreed to that fact among the respondents who take alcohol and 97 (59.1%) who do not take alcohol. When asked if alcohol increases sexual drive and ability, there was a difference in reply between the group taking alcohol (43.3%, n= 122) and the group that do not take alcohol (26.2%, n = 43). The group taking alcohol was more inclined to say that alcohol increases sexual drive.

There was a difference seen between the groups of consumers of alcohol and non-consumers of alcohol when asked if “one could leave their passed out friend to go to back to the party” with more respondents who take alcohol agreeing they would go back to the party (52.5%, n =148) leaving their friend behind as compared to 102 (62.8%) who says it is wrong to go back to the party from the group that does not take alcohol. This is worrying as the students who drink were more likely to leave their passed out friend to go to the party instead of taking care of them. .
Table 9: Awareness of Risk Factors

<table>
<thead>
<tr>
<th>Statements on alcohol</th>
<th>TRUE</th>
<th>FALSE</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol is a mood altering stimulant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (N=282)</td>
<td>247</td>
<td>135</td>
<td>11</td>
</tr>
<tr>
<td>No (N=164)</td>
<td>(87.6%)</td>
<td>(82.3%)</td>
<td>(3.9%)</td>
</tr>
<tr>
<td>The effects that alcohol has on the body vary according to the individual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (N=282)</td>
<td>250</td>
<td>139</td>
<td>24</td>
</tr>
<tr>
<td>No (N=164)</td>
<td>(88.7%)</td>
<td>(84.8%)</td>
<td>(14.6%)</td>
</tr>
<tr>
<td>Yes (N=282)</td>
<td>24</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td>No (N=164)</td>
<td>(8.2%)</td>
<td>(12.2%)</td>
<td>(3.2%)</td>
</tr>
<tr>
<td>Women respond to alcohol differently from men</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (N=282)</td>
<td>186</td>
<td>97</td>
<td>18</td>
</tr>
<tr>
<td>No (N=164)</td>
<td>(66%)</td>
<td>(59.1%)</td>
<td>(6.4%)</td>
</tr>
<tr>
<td>Alcohol increases your sexual drive and ability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (N=282)</td>
<td>122</td>
<td>43</td>
<td>14</td>
</tr>
<tr>
<td>No (N=164)</td>
<td>(43.3%)</td>
<td>(26.2%)</td>
<td>(8.5%)</td>
</tr>
<tr>
<td>It is Okay to put your drunk, passed out friend to bed and go back to the party</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (N=282)</td>
<td>148</td>
<td>47</td>
<td>14</td>
</tr>
<tr>
<td>No (N=164)</td>
<td>(52.5%)</td>
<td>(28.7%)</td>
<td>(5%)</td>
</tr>
<tr>
<td>If both parents drink, there is a high probability that the child will drink</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (N=282)</td>
<td>163</td>
<td>100</td>
<td>16</td>
</tr>
<tr>
<td>No (N=164)</td>
<td>(57.8%)</td>
<td>(61%)</td>
<td>(5.7%)</td>
</tr>
<tr>
<td>Binge drinking among young people has no relationship with development of alcoholism later in life</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (N=282)</td>
<td>84</td>
<td>44</td>
<td>20</td>
</tr>
<tr>
<td>No (N=164)</td>
<td>(29.8%)</td>
<td>(26.8%)</td>
<td>(7.1%)</td>
</tr>
<tr>
<td>Alcohol use at an early age increases the risk of alcohol dependence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (N=282)</td>
<td>212</td>
<td>137</td>
<td>23</td>
</tr>
<tr>
<td>No (N=164)</td>
<td>(75.2%)</td>
<td>(83.5%)</td>
<td>(14%)</td>
</tr>
</tbody>
</table>

When looking at the risk factors that could lead to alcohol abuse, 163 (57.8%) and 100 (61.0%) from both groups that consume alcohol and those that do not agree that “if both parents drink, there is a high probability that the child will drink”. Over 63% (n=178 vs. n=106) from both groups agree that Binge drinking among young people has relationship with development of alcoholism later in life. About 212 (75.2%) from the group that take alcohol and 37 (83.5%) from the group that do not take alcohol say it is true alcohol use at an early age increases the risk of alcohol dependence (table 9).
4.6 Alcohol Policy at the University

There is an alcohol policy working document which was made in January 2010 by a committee from different departments from the University. The policy looks at the employees and student's conduct with regard to prevention, care and support programs as well planning and implementation of the policy at the University. The university has an Alcohol and Drug Abuse Coordinator who reports to both the University Health clinic and NACADAA. Only 140 (31.4%) of the respondents knew about the existence of the alcohol policy at the University (figure 7).

Figure 7: Knowledge of alcohol policy

When asked if they knew where to get information about alcohol rehabilitation in the university, 88 (19.7%) said they knew and highlighted some of the places to be the University Health Clinic, Guidance and counseling office, Dean of students office and the Student Welfare Association.
(SWA). This was confirmed with the Key informants who highlighted that most students went to the Clinic and the Dean of students to get help.

“However by the time they reach the dean of students they are already having a problem with alcohol” (4th year student leader).

Figure 8: Knowledge on where to get alcohol rehabilitation information

The University Health clinic in collaboration with SONU each year held a drug awareness day to educate the students on alcohol and drug abuse. Also during the first year Orientation, the university would invite NACADA to talk to the students about alcohol and drug abuse. About 24 (27.6%) of the respondents who knew where to get information said they would go to the
University Health clinic for information while 21 (24.1%) will go to the Guidance and Counseling offices at the university (table 10).

Table 10: Places respondents to go to get information on alcohol rehabilitation at the University

<table>
<thead>
<tr>
<th>Place</th>
<th>Frequency (N = 87)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Health Clinic</td>
<td>24</td>
<td>27.6%</td>
</tr>
<tr>
<td>Guidance and counseling office</td>
<td>21</td>
<td>24.1%</td>
</tr>
<tr>
<td>Dean of students</td>
<td>10</td>
<td>11.5%</td>
</tr>
<tr>
<td>Psychiatry rehabilitation centre</td>
<td>5</td>
<td>5.7%</td>
</tr>
<tr>
<td>SWA</td>
<td>5</td>
<td>5.7%</td>
</tr>
<tr>
<td>NACADA</td>
<td>3</td>
<td>3.4%</td>
</tr>
<tr>
<td>Peer educators</td>
<td>3</td>
<td>3.4%</td>
</tr>
<tr>
<td>Advice from friends</td>
<td>2</td>
<td>2.3%</td>
</tr>
<tr>
<td>Church</td>
<td>2</td>
<td>2.3%</td>
</tr>
<tr>
<td>Clubs</td>
<td>2</td>
<td>2.3%</td>
</tr>
<tr>
<td>Internet</td>
<td>2</td>
<td>2.3%</td>
</tr>
<tr>
<td>Seminar</td>
<td>2</td>
<td>2.3%</td>
</tr>
<tr>
<td>Christian Union/Muslim Organization</td>
<td>1</td>
<td>1.1%</td>
</tr>
<tr>
<td>Department Counselor</td>
<td>1</td>
<td>1.1%</td>
</tr>
<tr>
<td>Lecturer</td>
<td>1</td>
<td>1.1%</td>
</tr>
<tr>
<td>Library</td>
<td>1</td>
<td>1.1%</td>
</tr>
<tr>
<td>UNADSAC</td>
<td>1</td>
<td>1.1%</td>
</tr>
<tr>
<td>WOSWA</td>
<td>1</td>
<td>1.1%</td>
</tr>
</tbody>
</table>
Chapter 5: Discussions

5.1 Prevalence of alcohol Abuse

Alcohol is the most commonly abused drug largely because it is sold legally and has attained a commodity status. Most alcohol adverts target men and tend to portray a picture that alcohol drinking is masculine. Those who escaped the allure of alcohol advertisements are captured by the fact that moderate alcohol drinking is good for their health. The study found 282 (63.2%) to have ever taken alcohol, this is contrast to the country’s current use of 13.4% (NACADAA, 2007). The huge difference implies that alcohol use is probably still regarded as being fashionable among college students and very few social sanctions exist to discourage this behavior. Chances of moving from use to abuse and dependence are therefore heightened, especially considering other factors such as age of onset and frequency of use. The findings are almost similar to a study done in Eldoret done by Lukoye in 2010 for college students which found a prevalence of 51.9 among university students.

5.2 Age of onset of drinking

In this study, age of first drink was found to be between 16 years old and above, with the youngest reported age being 7 years. On average, both sexes seem to start drinking later than the high risk age of 14 years, which is associated with high risk for alcohol abuse and dependence in later life according to studies on sample populations from the USA according to Dewitt (2000). However, a recent systematic review indicated that later adolescence drinking could progress into late adulthood drinking habits, and it was also associated with suicide, car crashes and mental and social problems (McCambridge, 2011). Otieno and Ofulla (2009) similarly found the
highest prevalence of alcohol use among young people aged 16-18 years. Several other studies have reported early age of onset of alcohol use among adolescents and the associated psychological problems in later life. The implication of the high rate of alcohol use and early age of onset in this study is that a large proportion of the respondents are at a high risk of developing alcohol related disorders as adults.

5.3 Binge Drinking

Over 14% of the respondents were taking 5 or more alcohol drinks at a sitting. A drink as defined as glass of wine, a bottle of beer or a small glass of liquor. Previous research suggests that although it is difficult to generalize alcohol use patterns in many African countries, binge-drinking is a common phenomenon in the Kenya. For instance, a study by Saunders et al (1993) among patients at primary health care centers reported that out of the six countries involved, the Kenyan sample had the highest rates of binge-drinking (episodic heavy drinking). Students who go to university believe that binge or excessive drinking is a social norm; that when you go off to university it's time to not only get a degree, but also a time to drink and socialize at parties. Ultimately alcohol becomes so much of a social norm that students do not realize how and when alcohol is abusive. Binge drinking is associated with risky sexual behavior, including engaging in unplanned sexual activity and failure to use protection during sex (Wechsler et al., 2000). It is also tied to antisocial behavior, including vandalism and getting into trouble with the police when drinking (Wechsler et al., 2002). In 2007, Chersich et al (2007) reported an association between binge-drinking and unsafe sex, sexual violence and sexually transmitted infections among Kenyan female sex workers, and the students in the present study are clearly exposed to the same risks. It is clear that unless substance use among adolescents and young adults is
addressed, interventions targeting HIV/AIDS, violence and accidents will achieve less than optimal results.

5.4 Factors associated with drinking

The only factors significantly associated with alcohol drinking included residence setting and part time work. A study done by NACADAA showed that compared with rural areas, urban centers has consistently larger proportions of respondents reporting to having ever used alcohol 9 NACADAA, 2007). This has also been confirmed by a South African study where they found that there was a higher alcohol intake among people in the urban as compared to the rural setting (Pelzer and Ramlagan, 2009).

University students are setting themselves up to become the alcoholics of the future because they drink when they are depressed or undergoing work related stress, and to simply have a so called good time. University students who abuse alcohol appear to find every reason to drink rather than avoid to drink. Therefore the problem is how to inform students in a socially acceptable manner on how and when alcohol abuse affects them. While most university students said they knew the risks associated with alcohol they continue to drink excessively because this behavior is perceived as normal. Alcohol is readily available and it is consumed mainly in pubs and other entertainment centers which have features which students crave.

Every university has an institutional sub-culture that differs from that of every other institution. Environmental factors like availability of alcohol, pricing, density of distribution outlets (i.e., bars and clubs) in the area surrounding the campus, the social settings where drinking takes place and campus customs influence the use of alcohol. The study found that most of the campuses
have bars that sell alcohol. The prices of alcohol were lower than the other bars found out of

campus. This likely increased the availability and accessibility of alcohol among the students.

Low price and very easy access to alcohol are strong correlates of binge drinking. Students

attending university’s that ban alcohol are less likely to drink and more likely to abstain from

alcohol.

AUDIT has been used to screen for alcohol problems in various university including South

Africa and Nigeria and has been shown to give valid and reliable results (Young and Mason,

2010). The study shows AUDIT scores for Zone 2, 3 and 4. This highlights the risk of developing

alcohol dependence later on life. More worrying is Zone 4 as clearly they need an urgent

intervention at the university.

There is clear need to inform and educate the students on alcohol and its negative effects of

alcohol. This was seen clearly when the majority of the respondents thought alcohol was a

stimulant and not a depressant. The university holds a drug awareness day and also holds talks

during the first year orientation, this shows either students do not attend the functions or do not

listen to the message.

5.5 University Alcohol Policy

In several studies, University alcohol policies were associated with drinking behavior among

university students. University alcohol control policies are associated with less drinking and

binge drinking among university students. Students attending university’s that ban alcohol were

less likely to binge drink and more likely to abstain from alcohol (Wechsler et al., 2001). Campus

alcohol bans appear to strongly deter students from any alcohol use if they were an

abstainer, although the effect is less strong for heavier drinking levels (Chaloupka and Wechsler,
1996). Restrictions on sales to and possession by persons younger than the legal drinking age are associated with less drinking by underage university students. This is especially important since 5.2% of the respondents were 19 years and below noting some were below the age of 18 (The legal drinking age in Kenya).

Looking at the University alcohol policy and comparing it with the alcoholic Act 2010, shows significant differences. The university alcohol policy was developed in 2010 the same year as the alcoholic act was put into effect. Observation during the study has shown clearly the bars in the campus do not follow the Act popularly known as “mutothu law”. Even though the Act clearly state the hours when an establishment is supposed to sell alcohol, the university policy itself does not clearly show the regulations in terms of opening hours. This should be included since most of the campuses have bars. The Act clearly shows the need to have information and education on alcohol so as to let people know the consequences of alcohol misuse and abuse. In the university, there is drug awareness day however there is need for more awareness of the policy and information on alcohol.

Monitoring of the policy implementation is very important. It will help the university to assess the impact the policy has but also any feedback on it will be key. Currently, the country is taking the alcohol problem seriously and the university should follow suit.
Chapter 6: Conclusion

There is high consumption of alcohol at the University of Nairobi. The prevailing norms at the university facilitate easy access to alcohol. The University alcohol policy has existed for 2 years but very few students are aware of it and therefore do not follow it.

6.1 Alcohol Use

The study has shown there is high consumption of alcohol among the students in the university. There is no difference between the students who were found in the various colleges with regards to age, gender, family structure and part time work. Most university students were between the ages of 18 and 23 years which is the current student age for those who are in campus. There are younger students this year with a few students being 17 years and this may be due to double intake experienced by the university. The study found no difference between use of alcohol among the colleges of the University.

The AUDIT test showed some students were likely to be alcohol dependent. There is need to screen students to enable identification of students at risk so as to get treatment and rehabilitation services. It has been observed that alcohol abuse among university students is a social phenomenon that is currently normative in nature.

6.2 Norms and laws: Accessibility

Prevailing favorable norms has made alcohol accessibility easy. The accessibility of alcohol at the university has increased the risk of alcohol consumption; this can be seen by the number of outlets and also the pricing of alcohol at the colleges. Almost in all the campuses, the students
prefer cheaper liquor and beer to get high and these are accessible at the university. Most of the respondents highlighted they access alcohol at the university’s and from their friends.

6.3 Awareness of risk factors

Even though most of the students are aware of risk factors associated with alcohol there is still need to promote information on alcohol. Most of the student’s perceived alcohol is a stimulant. In line with the primary prevention of alcohol abuse with “better information” on alcohol, there is room for more information on alcohol and its negative effects. Even though education is an ineffective means of preventing alcohol-related harm as compared with measures like price controls and restrictions on alcohol availability and marketing, it is still important to educate the students in the effects of alcohol.

6.4 University Alcohol Policy

Most of the respondents are not aware of the alcohol policy at the university which was developed in 2010. There is need for the university to review the policy in view of the alcoholic act 2010 and also review the extent and level of dissemination to the students and faculty as part of the strategy.
Chapter 7: Recommendations

In view of the study findings, the following recommendations are made:

1. Increased awareness on the adverse effects of alcohol at the individual, and university level.

There is need to increase awareness on alcohol and give the students basic facts on what alcohol are and its effects. There is also need to do a campaign on where to get help if one needs treatment and rehabilitation. Knowing the students are on the go and most will most likely not attend seminars; innovative ways needs to be employed to get the message to them. Use of social media and the internet has been known to effectively work in giving information to young people since the young people are more likely listen and read using these media. This should be done by the University Health Clinic in partnership with Student Organization of Nairobi University (SONU). Student organizations and NGO’s working in the university for example I Choose Life-Africa should join hands with the administration to create more awareness on the adverse effects of alcohol.

2. Enhanced interventions programs targeting the students who are at risk of developing alcohol abuse or dependence.

There needs to be screening of the students with either using CAGE method or AUDIT to identify students who are risk of having alcohol abuse and further investigation done. By being able to identify the students at risk there is more likelihood of curbing the problem early. Once the university has identified the students who are at risk of developing
alcohol dependence, intervention programs targeted at them need to be developed. The University Health Services need to proactively have intervention programs that target such students to help prevent alcohol dependence.

3. Review of the University alcohol policy with regard to the Alcoholic Drinks Act 2010.
   Even though the university alcohol policy was developed the same year as the alcohol Drinks Act 2010, it has not factored in any of the recommendations from the Act. It is therefore imperative that the policy be revised to be in line with the Act since the university is a reflection of the whole country. A mid-term review of the policy need to be done to measure the effectiveness.

4. Enhanced enforcement of the university policy, since it became evident that there was laxity in the enforcement of the policy that governs the university.

   Once the university alcohol policy is revised, it is important to disseminate it to the relevant authorities and stakeholders. The policy should also be disseminated to the students to enhance awareness. The security personnel, wardens and the student welfare authority will need to be trained on the policy to ensure they effectively enforce the policy at the University including monitoring the timing of opening hours of the bars.
REFERENCES


2. American Psychiatric Association (2000). Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR), Vancouver, USA


APPENDIXES

Appendix 1: Informed Consent

INFORMED CONSENT FORM

Informed Consent Form for University of Nairobi Students

Research Title: Factors Associated With Alcohol Abuse among University Of Nairobi Students

Introduction
I am Michelle Hassan, a Masters student at The Nairobi University School of Public Health. I am doing research on factors associated with alcohol abuse among University of Nairobi students. I am going to give you information and invite you to be part of this research. There may be some words that you do not understand. Please ask me to stop as we go through the information and I will take time to explain.

Purpose of the research
The purpose of this study will be, to establish the factors associated with alcohol abuse among University of Nairobi.

Type of Research Intervention
This research will involve an interviewer based questionnaire.

Participant selection
I am inviting university of Nairobi undergraduate students to participate in the research. There will be representatives selected from all the colleges to participate in the study. One should be an undergraduate student at the university to participate in the study.

Voluntary Participation
Your participation in this research is entirely voluntary. It is your choice whether to participate or not. You may change your mind later and stop participating even if you agreed earlier.

Confidentiality
The information that I collect from this research project will be kept confidential. Information will be put away and no one but the researchers will be able to see it. Any information you have given will have a number on it instead of your name. Only the researchers will know what your number is.

Right to Refuse or Withdraw
You do not have to take part in this research if you do not wish to do so. You may also stop participating in the research at any time you choose. It is your choice and all of your rights will still be respected.

There is no monetary benefit to participate in the study however, the information received from you will help advice policy with regards to the alcohol in the university.

This proposal has been reviewed and approved by Kenyatta Hospital – University of Nairobi ERC, which is a committee whose task it is to make sure that research participants are protected from harm.

You can ask me any more questions about any part of the research study, if you wish to. Do you have any questions?

Certificate of Consent
I have read the foregoing information. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this research.

Name of Participant__________________

Signature of Participant ___________________

Date ___________________________  
Day/month/year

Statement by the researcher/person taking consent
I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands.

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability.

I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this Informed Consent Form has been provided to the participant.

Name of Researcher/person taking the consent______________________________

Signature of Researcher/person taking the consent______________________________

Date ___________________________
Appendix 2: Questionnaire

Questionnaire ID: __________  Date:_______________
Initials of your name: ______________

Which College are you in? (Tick appropriately)
1. College of Agriculture & Veterinary Sciences
2. College of Architecture & Engineering
3. College of Biological & Physical Sciences
4. College of Education & External Studies
5. College of Health Sciences
6. College of Humanities and Social sciences

Background Information

1. What year of study are you? *Please tick as appropriate.*
   1. First Year  2. Second Year  3. Third Year  4. Fourth Year
2. How old were you at your last birthday? ______ years
3. Are you male or female?  1. Male  2. Female
4. What type of place of residence did you grow up in?
   1- Urban slum area  2- Urban Non slum area  3Rural Area
5. Where do you live when you are in the University?
1. On Campus 2. Off Campus

6. Family Type
   5. Aunt/Uncle  6. Grandparent(s)

7. Do you work part time? 1. Yes 2. No

Access to alcohol

9. How old were you when you had your first drink of alcohol other than a few sips?
   1. I have never had a drink of alcohol other than a few sips
   2. 7 years old or younger
   3. 8 or 9 years old
   4. 10 or 11 years old
   5. 12 or 13 years old
   6. 14 or 15 years old
   7. 16 years old or older

10. During the past 30 days, on how many days did you have at least one drink containing alcohol?
    1. 0 days
    2. 1 or 2 days
    3. 3 to 5 days
    4. 6 to 9 days
    5. 10 to 19 days
    6. 20 to 29 days
    7. All 30 days

11. During the past 30 days, on the days you drank alcohol, how many drinks did you usually drink per day?
    1. I did not drink alcohol during the past 30 days
    2. Less than one drink
    3. 1 drink
    4. 2 drinks
    5. 3 drinks
    6. 4 drinks
    7. 5 or more drinks

12. What type of alcohol do you usually drink? SELECT ONLY ONE RESPONSE.
1. I do not drink alcohol
2. Beer, lager, or stout
3. Wine
4. Spirits,
5. Changaa
6. Busaa
7. Mnazi
8. Muratina

13. How often do you have a drink containing alcohol?
   1. Never
   2. Monthly or less
   3. 2-4 times a month
   4. 2-3 times a week
   5. 5 or more times a week

14. How many standard drinks containing alcohol do you have on a typical day when Drinking?
   1. Never
   2. 1 or 2
   3. 3 or 4
   4. 5 or 6
   5. 7 to 9
   6. 10 or more

For the following questions, please respond to the statement based on Never, less than monthly, Monthly, Weekly, daily or almost daily.

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Less than monthly</th>
<th>Monthly</th>
<th>Weekly</th>
<th>Daily or almost daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. How often do you have six or more drinks on one occasion?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. During the past year, how often have you found that you were not able to stop drinking once you had started?</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>17. During the past year, how often have you failed to do what was normally expected of you because of drinking?</td>
<td></td>
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</tr>
<tr>
<td>18. During the past year, how often have you needed a drink in the morning to get</td>
<td></td>
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</tbody>
</table>
yourself going after a heavy drinking session?

19. During the past year, how often have you had a feeling of guilt or remorse after drinking?

20. Have you been unable to remember what happened the night before because you had been drinking during the past year?

21. Have you or someone else been injured as a result of your drinking?
   1. I do not drink
   2. No
   3. Yes, but not in the past year
   4. Yes, during the past year

22. Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested you cut down?
   1. I do not drink
   2. No
   3. Yes, but not in the past year
   4. Yes, during the past year

23. Where do you usually get alcohol? (tick all that apply)
   1. At college
   2. At home
   3. Bar
   4. Friend
   5. Other (specify) ________________

24. If you consume alcohol, what is the main reason for that?
   1. Peer Pressure
   2. Stress
   3. Family
   4. For Fun
   5. Addiction
   6. Boredom
   7. Other (specify) ________________

25. Who introduced you to alcohol?
   1. Parent
   2. Sibling
   3. Friend from school
4. Friend from home
5. Myself
6. Other(specify) ________________________

For the following set of questions, please answer true of False depending on your knowledge of alcohol

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.</td>
<td>Alcohol is a mood altering stimulant.</td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>The affects that alcohol has on the body vary according to the individual.</td>
<td></td>
</tr>
<tr>
<td>28.</td>
<td>Women respond to alcohol differently than men do.</td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>Alcohol increases your sexual drive and ability.</td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td>It is okay to put your drunk, passed out friend to bed and go back to the party.</td>
<td></td>
</tr>
<tr>
<td>31.</td>
<td>If both parents drink, there is a high probability that the child will drink.</td>
<td></td>
</tr>
<tr>
<td>32.</td>
<td>Binge drinking among young people has no relationship with development of alcoholism later in life</td>
<td></td>
</tr>
<tr>
<td>33.</td>
<td>Alcohol use at an early age increases the risk of dependence.</td>
<td></td>
</tr>
</tbody>
</table>

34. To your knowledge, do you know if an alcohol policy exists in the university?
   1. Yes
   2. No

35. Do you know where you can get information about alcohol rehabilitation in the university?
   1. Yes
   2. No

35a. If yes, where can you get the information?

___________________________________

Thank you for participating in the study!
Appendix 3: Key Informant Informed Consent

Factors Associated with alcohol abuse among University of Nairobi students

My name is Michelle Hassan, a Masters student at The Nairobi University School of Public Health. I am doing research on factors associated with alcohol abuse among University of Nairobi students. You have been selected as a key informant because of your interaction with the students and your input would be very valuable to the study. I would be recording the conversation for future reference. The information that I collect from this conversation will be kept confidential. Information will be put away and no one but the researcher will be able to see it.

This proposal has been reviewed and approved by Kenyatta Hospital – University of Nairobi ERC, which is a committee whose task it is to make sure that research participants are protected from harm.

You can ask me any more questions about any part of the research study, if you wish to. Do you have any questions?

Certificate of Consent
I have read the foregoing information. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this research.

Name of Participant__________________
Signature of Participant ___________________
Date ___________________________
   Day/month/year

Statement by the researcher/person taking consent
I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands.

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability.

I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this Informed Consent Form has been provided to the participant.
Name of Researcher/person taking the consent________________________
Signature of Researcher /person taking the consent________________________
Appendix 4: Key Informant Guide

Name: ___________________________  Department: ____________________________

College: _________________________  Post: ________________________________

Gender: __________________________

1. Generally, what is your view with regard to alcohol abuse in the university?

2. Which types of alcohol is mostly abused by the students?

3. What are the main reasons for students abusing alcohol?

4. Between the males and females, who are taking more alcohol? Why do you think that way?

5. What are some of the consequences or effects of alcohol abuse have you seen in the university?

6. Are there intervention programs in the university with regards to alcohol abuse?

7. Where can students get treatment on alcohol in the university?

8. What are the barriers to treatment by the students?

9. What role has the university played in preventing alcohol abuse in the university?

10. To your knowledge, do you know if an alcohol policy exists in the university?