PREVALENCE, PATTERNS, EFFECTS AND COUNSELLING INTERVENTIONS OF ALCOHOL USE AMONG STUDENTS IN PRIVATE FAITH BASED AND PUBLIC UNIVERSITIES IN KENYA

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DECLARATION AND RECOMMENDATION

Declaration

This thesis is my original work and has not been presented for an award of a degree in any other university.

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DEDICATION

I dedicate this Doctoral Thesis to my dear husband Gerald Mugo, and my two daughters: Shanelle Wanjiku and Clarice Waithera.

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ABSTRACT

Public health concern about alcohol consumption and associated risk behaviours in young people is increasing, especially among university students. Despite growing problems of global alcohol abuse among university students, accurate information on the prevalence, patterns and effects of use among university students in Kenya remains sparse. The purpose of this study was therefore to examine the prevalence, patterns, effects, and counselling interventions of alcohol use among university students in private faith based and public universities. The study employed two theories namely: Social Learning Theory and Outcome Expectancy Theory. The study was *ex post facto* in approach and adopted the causal comparative research design. The study was carried out in four purposively sampled universities: two public universities and two private faith based universities. The target population was 31,869 fulltime undergraduate students in the four universities, while accessible population was 19,177 fulltime undergraduate students in the main campuses of the universities. The sample was 374 students from the four universities. The staff sample consisted of 12 personnel from the departments of student affairs/welfare in the universities. The data was collected by use of a questionnaire for the students, an interview schedule for the personnel in student welfare departments/directorates, and a Focus Group Discussion with 12 members of peer counselling club in each university. Piloting was done at Meru University and Nazarene University-Meru Campus, prior to actual data collection. Cronbach's Coefficient Alpha was computed, and $\alpha = 0.81$ confirmed the internal consistency of the instrument. Data collected, was analysed by use of SPSS version 21.0. The research findings revealed high prevalence of alcohol use, with 30.5% of the students reporting current use. Majority of the respondents were low-risk alcohol users according to the AUDIT scale and 27.6% of current users met the criteria for clinically significant alcohol problem on CAGE scale. A significant relationship was found between current use and the type of university. However, being in either type of universities was not associated with past year and life-time alcohol use. Patterns of alcohol were also related to the type of university. Effects of alcohol use mostly reported by respondents included running broke, missing classes, falling sick, and feeling bad about oneself. Counselling interventions most utilized in all the universities were psycho-educational in nature, and included sensitization campaigns and trainings. The study concluded that prevalence of alcohol use among university students is high and effects are enormous to the users and non-users. Thus, the study recommends specific counselling interventions based on the levels of use because alcohol use patterns are varied among university students.

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LIST OF ABBREVIATIONS AND ACRONYMS

AA	Alcoholics Anonymous
ADA	Alcohol and Drug Abuse
ADH	Alcohol Dehydrogenase
AIDS	Acquired ImmunoDeficiency Syndrome
ALDH	Aldehyde-Dehydrogenase
ASTP	Alcohol Skills Training Programme
AUDIT	Alcohol Use Disorder Identification Test
BAC	Blood Alcohol Concentration
CNS	Central Nervous System
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, 4th. Edition
FB	Faith Based
FGD	Focus Group Discussion
GABA	Gamma-Aminobutyric Acid
HELB	Higher Education Loans Board
HIV	Human Immunodeficiency Virus
ICAP	International Center for Alcohol Policies
KWAL	Kenya Wines Agency Limited
MI	Motivational Interviewing
NACADA	National Authority for the Campaign against Drugs Abuse
NACOSTI	National Commission of Science, Technology and Innovations
NIAAA	National Institute on Alcohol Abuse and Alcoholism
NIH	National Institute of Health
NMDA	N-Methyl-D-Aspartate
SLT	Social Learning Theory
SNAPP	Sacramento Neighbourhood Alcohol Prevention Project

USA	United States of America
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Alcohol ranks number eight among global risk factors that cause death (World Health Organisation [WHO], 2009). It is the third leading global risk factor for disease and disability, after childhood underweight and unsafe sex (WHO, 2011). Overall, about 3.3 million deaths in 2012 are estimated to have been caused by alcohol consumption. This corresponds to 5.9% of all deaths, or one in every twenty deaths in the world (7.6% for men, 4.0% for women) (WHO, 2014). Alcohol use and associated risk behaviours among young people raises public health concern, because it is the leading cause of injury and death among university students and young adults in the USA, and particularly those who engage in heavy episodic drinking (National Institute on Alcohol Abuse and Alcoholism[NIAAA], 2005a; Libatique, 2011). WHO (2011), reports that globally, 320,000 people aged 15-29 years die annually, from alcohol-related causes, making up 9% of all deaths in that age group. This is the age group to which most university students belong.

A review by Hingson (2010) on magnitude and prevention of college drinking revealed that alcohol use is associated with a myriad of negative effects among 18-24 year-old university students (mostly referred to as college students in the literature) in the USA. This review found that, 1,825 students die annually from alcohol related unintentional injuries; 590,000 are injured under the influence of alcohol; 690,000 are assaulted by other students who have been drinking; 97,000 are victims of alcohol-related assault or date rape; about 400,000 have had unprotected sex and more than 100,000 students have been too intoxicated to know if they consented to having sex. Hanson, Venturelli and Fleckenstein (2014) later pointed out that, alcohol use especially heavy drinking among university students is associated with unsafe and unintended sexual activities, deaths due to falls and other personal injury; alcohol overdose and suicide. Alcohol use is also associated with academic problems such as missing classes and poor academic performance; vandalism and property damage as well as alcohol abuse and dependence. Alcohol use is also considered as a gateway to other drug use and dependence. For instance, data from the 2005 and 2012 National Survey of Drug Use and Health in the

United States (Office of Applied Studies), found out that, compared with adults who had never drank alcohol, adults who had consumed alcohol were statistically much more likely to use illicit drugs currently, and/or abuse prescription drugs in the past year. In addition, lifetime drinkers (individuals who have ever tasted alcohol in their lifetime) were also six times more likely to use or be dependent on illicit drugs than lifetime non-drinkers (Office of Applied Studies, 2005; Office of Applied Studies, 2012).

Prevalence of alcohol use among college and university students in the USA has been studied widely. For instance, results from the 2012 National Survey on Drug Use and Health in the US indicates that among full-time college students in that year, 60.3 percent were current drinkers, 40.1 percent were binge drinkers, and 14.4 percent were heavy drinkers. In China, Cheng-Ye, Pei-Jin and Yi (2012), found out that alcohol use and misuse among university students (referred as college students), was also prevalent in that 80.8% were lifetime drinkers, 49.3% were current drinkers (drank alcohol in past 30 days) and 23.5% were binge drinkers (drank five or more drinks in a period of 2 hours). The patterns of use of alcohol among university students are varied and related to parties, celebrations, graduation parties, and holidays. Alcohol is often central to the social and sporting life of students, and undoubtedly plays an integral role in socialization and rites of passage in colleges and universities (Maria et al., 2008; Cheng-Ye, Pei-Jin &Yi, 2012). According to Lorant, Nicaise, Soto and Hoore (2013), the drinking pattern of many university students is one of episodic excess and intoxication. These patterns of drinking according to Hanson et al. (2014), usually occur in the following settings: fraternity parties, athletic events, in residence halls, and in bars adjacent to campus.

Further, a limited number of research studies have revealed the differences in alcohol use patterns among students in religious universities and those in state/public universities. Two such studies found out that students in conservative religious sub-cultural settings, such as faith based universities, tend to exhibit less substance use overall compared to students in other university settings (Felt, McBride & Helm, 2010; Helm, Boward, McBride, & Del 2002). This, according to Ghandour, Karam and Maalaf (2009) can be attributed to the fact that students belonging to such conservative religious settings may be shielded from the

opportunity to try alcohol. According to Baker (2008), faith based institutions provide a greenhouse environment that is both protected, and yet not isolated from the world around them. Students in this kind of environment are prohibited from several common elements. They are required, in varying degrees, to abstain from alcohol and illegal drugs, premarital sex, viewing pornography among others. These universities, governed by conservative religious entities, are part of a strong religious subculture, can be viewed as a powerful social reference group that may limit substance use.

Due to the public health concerns associated with alcohol use among university students, various universities have implemented a variety of interventions on campuses to address alcohol use, and especially excessive drinking and associated negative consequences. One of the most common interventions to student drinking by universities has involved education/information-based prevention methods (NIAAA, 2002). However, informational intervention only has not been effective. Other interventions employed especially in the universities in the USA that have proved effective include, brief interventions (Krupski et al., 2012; McQueen, Howe, Allan, Mains & Hardy, 2011) and motivational interviewing (Carey, 2012), alcohol skills training programme (MacMaster, Holleran & Chaffin, 2013), computerized interventions such as web-based approaches (Campbell & Hester, 2012; Walters & Neighbors, 2011), campus-community partnership (Fairlie, Erickson & Wood, 2012) use of peer to peer education and counselling.

In the African region, a limited number of studies have been carried out to examine the prevalence of alcohol use among university students (Stafstrom & Agardh, 2012; Wakgari & Aklilu, 2011). Stafstrom and Agardh (2012) found out that almost half of the students in Mbarara University in Uganda were current alcohol users, and a quarter of them had engaged in heavy episodic drinking. Wakgari and Aklilu (2011) had earlier found out that about a third (31%) of medical students of Addis Ababa University from first year to internship were lifetime users of alcohol and 22% reported drinking alcohol in the past year. In Kenya, a number of studies have been carried out by National Authority for Campaign against Alcohol and Drug Abuse (NACADA), to assess the prevalence of substance use in the general population. The first-ever national baseline survey on substance abuse among the youth aged

between 10 and 24 years in Kenya revealed that substance abuse is widespread and cuts across all social groups of the youth. The findings established that alcohol is one of the mostly abused substances by the youths. Out of the youths who were interviewed, 27.7% of them from primary school to university reported lifetime use of alcohol (NACADA, 2004). Further, NACADA (2007), revealed that 34.6% and 11.7% of the youths surveyed between the ages of 18-24 years were lifetime and current alcohol users respectively. A recent study by NACADA (2012) reported a general decline in current use of alcohol among 18-24 years old to 10.2%.

Data on alcohol use situation among the students in universities in Kenya is still limited, yet the number of universities has greatly increased. According to Commission for University Education (2013), there are a total of 22 public universities, nine (9) public university constituent colleges, 17 chartered private universities, five (5) private university constituent colleges, nine (9) universities with Letters of Interim Authority and two (2) registered private universities. This brings to 64 the total complement of public and private universities in the country. The public universities are state owned and predominantly funded by public means through the national government. Private universities, on the other hand, get their funding from tuition, investments and private donors. Out of the 22 public universities, 7 have been in existence for long and were established through Acts of parliament. The other 15 were mainly constituent colleges of the 7, and were recently elevated to fully fledged universities. Out of 17 Private chartered universities, 13 are faith based, as such their ethos and policies are based on their religious affiliations. In this regard therefore, alcohol and drug use is highly prohibited within these universities' precincts, unlike some public universities that do have student centres with bars/pubs within the universities.

Among the few studies on prevalence and patterns of alcohol use from universities in Kenya, Odek and Pande (1999), reported high rates of alcohol use among students at a Kenyan private university with rates as high as 84.2% and 11.5% of lifetime and current use of alcohol respectively. Further, another recent study by Atwoli, Mungla, Ndungu, Kinoti and Ogot (2011), on substance use among college and university students in Eldoret municipality, revealed that 51.9% of the students surveyed were lifetime alcohol users and 97.6% of alcohol users had consumed alcohol in the week prior to the study. Considering the large numbers of

universities in Kenya, there is still need for more empirical data on the patterns, prevalence and effects of alcohol use among university students. This heightened interest in the patterns of alcohol use among university students in Kenya stems from its association with a variety of alcohol-related problems, including poor academic performance, physical fights, unintentional injuries, and deaths. In addition, little information is available on the counselling interventions implemented in Kenyan universities in response to alcohol use. This study therefore sought to find out the extent of alcohol use, in terms of the patterns, prevalence, and effects of alcohol use among university students in private faith based and public universities, as well as establish the counselling interventions employed to address the problem. The paucity of this data on prevalence and patterns of alcohol use among university students in Kenya has serious implications on the success of any interventions aimed at reducing this problem. The faith based universities as noted by Baker (2008) may shield the students from using substances of abuse like alcohol because of the faith based values and ethics that govern them. It was therefore in the interest of this study to establish whether prevalence and patterns of alcohol use among these students were related to type of university.

1.2 Statement of the Problem

Alcohol accounted for an average of 4.5 percent of all the deaths that occurred in the Kenya between 2010 and 2012; and 8.5% of the youths aged 18-24 years had used alcohol in the last month prior to the study (NACADA, 2013). This is the age bracket that majority of the university students belong. Alcohol use among university students is a public concern because of the risks associated with it including: fatal and non-fatal injuries, alcohol poisoning, blackouts and academic failure that may lead to discontinuation. It is also associated with violence, including rape and assault, risky sexual behaviours and unintended pregnancies, sexually transmitted diseases including HIV/AIDS, property damage, alcohol use and abuse, and vocational and criminal consequences that could jeopardize future job prospects. Incidences of alcohol use among the university students have been widely reported despite various effort by the Kenya government and the management of the universities to control alcohol use. The Kenyan media is awash with reports of university students who have died or otherwise adversely affected by alcohol use. For instance, in May 2015, a student from the University of Nairobi died after he fell from third floor of their hostel after he and five others

had had alcoholic drinks (Ombati, 2015). Another student from Moi University was admitted at Moi Referral hospital after consuming an adulterated alcoholic drink during a party organized by friends (Ndanyi, 2014). In response to rampant alcohol related problems, the government of Kenya has shown commitment to regulate and control alcohol use by enacting a number of legislations like The Alcoholic Drinks Act, 2010; banning the second hand generation alcohol; and establishing National Authority for the Campaign against Drug Abuse (NACADA). Universities in Kenya too have developed policies governing alcohol and drug abuse and have also established guidance and counselling units to help students. However, consumption of alcohol use among university students still remains rampant (Chesang, 2013).

The university environment, makes the students very susceptible to alcohol use due to diverse reasons such as being away from their families and parents, which in turn prevents use of rules or curfews. Consequently, students struggle to keep control of their lifestyle because there are no authority figures to watch over their decisions making. There has been an increase in the number of universities in Kenya, both private and public, and about 13 private universities are faith based. Faith based universities are unique in many ways. Usually, these campuses are affiliated with specific denominations, and have very strict policies concerning use of alcohol and other drugs. Alcohol use within these universities is highly prohibited, and students caught drank are summoned to disciplinary committees. Since little empirical data is available on the prevalence, patterns, and effects of alcohol use among university students in both private faith based and public universities, this study sought to fill this gap. Subsequently, since the campus environment of faith based universities is different from public universities, it is important to establish whether prevalence and patterns of alcohol use among students are related to type of university, and what counselling interventions have been employed to control alcohol use in both private faith based and public universities in Kenya.

1.3 Purpose of the Study

The purpose of this study was to establish the prevalence, patterns and effects of alcohol use among the students in private faith based and public universities, and document the counselling interventions put in place in these institutions to control alcohol use.

1.4 Objectives of the Study

The study was guided by the following objectives:

(i) To establish the prevalence of alcohol use among students in private faith based and public universities in Kenya.

(ii) To establish the relationship between prevalence of alcohol use among university students and type of university.

(iii) To determine alcohol use patterns among students in private faith based and public universities in Kenya.

(iv) To establish the relationship between alcohol use patterns among university students and type of university

(v) To find out the effects of alcohol use experienced by students in private faith based and public universities in Kenya.

(vi) To establish the counselling interventions put in place to control alcohol use among students in private faith based and public universities in Kenya.

1.5 Research Questions

The study sought to answer the following questions.

(i) What is the prevalence of alcohol use among students in private faith based and public universities in Kenya?

(ii) What is the relationship between prevalence of alcohol use among university students and type of university?

(iii) What are the alcohol use patterns among students in private faith based and public universities in Kenya?

(iv) Are patterns of alcohol use among students in private faith based and public universities in Kenya related to type of university?

(v) What are the effects of alcohol use among students in private faith based and public universities in Kenya?

(vi) What counselling interventions have been put in place to control alcohol use among students in private faith based and public universities in Kenya?

1.6 Significance of the Study

One major significance of this study was the provision of empirical evidence on the prevalence and patterns of alcohol use among students in both private faith based and public universities in Kenya. The findings may be of great contribution to the existing body of knowledge especially for scholars in related areas. In addition, it could form a basis from which researchers can do literature review to establish gaps for further research, as well as make reference. The information gathered on alcohol use would be very useful to the administration of these institutions in creating awareness on the extent and patterns of alcohol use among their students. With this information, the managers of these institutions would be better placed to make informed decisions on how and where to intervene.

The information gathered would be of great relevance to the guidance and counselling centres in both the public and private universities. This is because the counselling professionals in these institutions will be able to envisage the picture on the ground with respect to alcohol use among their students. For instance, findings on prevalence, patterns and various effects of alcohol use among university students would be a great resource during the psychoeducation forums such as orientation of first years and other sensitization campaigns. Further, the information on counselling interventions put in place in various universities would be used for benchmarking as well as help in coming up with relevant intervention strategies to curb or reduce the problem. This study established that universities sampled mainly utilized educational component of counselling interventions to alcohol use, and according to literature, educational-only interventions have been found to be ineffective. This would therefore mean that counsellors in universities need to come up with interventions that have been found to work with similar cohorts in other universities in the other parts of the world.

The findings of the study are of interest to National Authority for the Campaign against Drug Abuse (NACADA), an authority that works towards fighting drugs and alcohol abuse in the country. This is because most of the researches done by NACADA have focused on the general population, and not specifically on university students. It would be significant for NACADA to note that according to the findings of this study, the prevalence of alcohol use among the university students was much higher than that of the general population in Kenya. Thus,

NACADA would need to team up with the management of both private and public universities to implement appropriate strategies to intervene. The student body in general will be well informed on the trend of alcohol use and their associated effects among their colleagues, hence respond accordingly. For instance, peer counselling clubs, anti-alcohol/drug clubs and other clubs interested in the control of alcohol use, may use the information as reference point during their peer education and anti-drugs campaign forums.

1.7 Scope of the Study

The study was limited to four universities in Kenya, two public universities and two private faith based universities. All the four universities are located in different counties in Kenya. The study involved fulltime undergraduate students and personnel working in the Department/Directorate of Student Welfare/Affairs in the main campuses of the four universities. The main campuses of these universities were considered because of the availability of accommodation facilities for the students hence the ease in administration of questionnaires. The study focused on the prevalence, patterns, and effects of alcohol use among students in the four universities. The AUDIT scale was used to assess low risk, hazardous, harmful and dependent alcohol use patterns of alcohol use while CAGE scale on the other hand was used to measure problematic drinking patterns among the respondents. The study also sought to establish the counselling interventions put in place in all the four universities in response to alcohol use. Student respondents were asked to identify the counselling interventions practiced in their universities as well as those they might have accessed. Students Counsellors provided more information on the counselling interventions they have implemented in response to alcohol use among the students.

1.8 Limitations of the Study

Alcohol use is a sensitive issue especially in faith based universities, thus, some students were hesitant to reveal accurate information in regard to alcohol use, for fear of victimization. Further, the study was self-reported thus introducing a possibility of self-report bias especially in private faith based universities where alcohol use is prohibited and can result to disciplinary action. As with any self-report instrument, these data are vulnerable to fabrication or inaccurate participant recall. Notably, the researcher assured the respondents that their participation was

voluntary and confidential with regard to their responses. They were also guaranteed anonymity, as no identifying details were asked. These measures were meant to increase confidence in the quality of the data collected.

1.9 Assumptions of the Study

The assumptions of the study were:

i. That the management of the sampled universities would offer co-operation by allowing the researcher to conduct the study in their universities.
ii. That the respondents would be cooperative and provide reliable information.
iii. The triangulation of data collection methods was useful in enriching the study.

1.10 Definitions of Terms

The following terms adopted the following meanings according to this study:

Alcohol: This refers to beverage alcohol that is, ethyl alcohol or ethanol (Myers & Isralowitz (2011). According to this study alcohol referred to any beverage with alcohol content such as beers, wines, spirits, and traditional liquors such as *muratina*, *busaa* and *chang'aa.*

Alcohol use: This is use of any beverage with alcohol including beers, wines, and spirits (Maisto, Galizo & Connor, 2010). Alcohol use in this study took a general term to refer to any level of alcohol use including low risk, hazardous, harmful or dependent drinking

Alcohol user: This is any student who consumes alcohol at any level; whether at low risk, hazardous, harmful or at dependent level.

Counselling intervention: This is a technique, act or a skill that that leads to an outcome or a goal in the counselling relationship (Hackney, 1992). This implied any attempt or act that uses counselling techniques to help a university student stop or control alcohol use, this can be done in on one on one basis or in a group situation or at institutional level.

Current Use: This is any level of alcohol use a month prior to the study (Office of Applied Studies, 2012). According to this study, current use referred to use of alcohol in the month preceding data collection. Current users were therefore university students who had used alcohol a month prior data collection. For the sake of this study, current users were categorized as least alcohol problem, low alcohol problem, and those with clinically significant alcohol problem (problem drinkers).

Drink: This is a liquid that can be swallowed as refreshment or nourishment (Oxford Online Dictionary, n.d.). However, according to this study a drink is used to mean a can or bottle of beer, a glass of wine or a wine cooler, a shot of liquor, or a mixed drink with liquor in it, or a mug or a tin of *chang'aa* or *muratina.*

Effect	This is something brought about by a cause or agent; a result (Oxford Online Dictionary, n.d.). According to this study, effect refers to any negative consequence that follows alcohol use of a university student. This can be psychological, academic, health, or social consequence.
Harmful drinking	This is a pattern of drinking that is already causing physical or mental health damage to the person which has persisted for at least one month or has occurred repeatedly over the course of one year (Baer & Blais, 2009). According to this study, harmful drinking is a risky level of alcohol use equivalent to a total score of 16 to 19 on the AUDIT scale.
Hazardous drinking	This is a pattern of alcohol use that increases the risk of harmful consequences for the drinker without having yet caused any alcohol-related harm (Baer & Blais, 2009). According to this study, hazardous drinking is a pattern of use that represent moderate alcohol problems and is equivalent to a total score of 8 to 15 on the AUDIT scale.
Lifetime Use	This is use of alcohol at least once in one's lifetime (Office of Applied Studies, 2012). Lifetime users referred to university students who had ever used alcohol at least once in their lifetime.
Pattern	This is a regular and intelligible form or sequence discernible in the way in which something happens or is done (Oxford Online Dictionary, n.d.). According to this study, patterns referred to a particular way in which alcohol use happens among the university students. Such aspects included temporal variations in drinking such as low risk, hazardous, harmful or dependent drinking; activities or circumstances associated with drinking; days of alcohol use; and types of beverage consumed.
Past year Use	This is alcohol use over the past year prior to the study (Office of Applied Studies, 2012). According to this study, past year alcohol use referred to alcohol use in the past year preceding data collection. Past year users were therefore university students who had consumed any alcoholic beverage in the past year prior to the study.
Prevalence	This is the ratio (for a given time period) of the number of occurrences of a disease or event to the number of units at risk in the population

	(Medical Online Dictionary, n.d.). In this study however, prevalence referred to the proportion of the population that is using alcohol. This will be expressed in percentage; that is percentage of lifetime, past year and current alcohol users
Private Faith Based University	This is a university whose funding comes from tuition, investments and private donors and is affiliated to a certain religious faith ("Types of Universities, n.d").
Public University	This referred to a state sponsored university with no religious affiliations ("Types of Universities, n.d").
Regular Student	This referred to a student who is studying in the university on full time basis, that is, he/she attends classes during the day.
Second-hand Effect	This is a negative experience directly resulting from someone else's drinking.(Langley, Kypri, & Stephenson, 2003). This referred to any adverse experience experienced by a student as a result of drinking behaviours of another student

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the literature on alcohol use, effects of alcohol use, prevalence and patterns of alcohol use among the students in the universities globally and locally, and the interventions that have been implemented to address the problem in various universities in the world.

2.2 Definition of Alcohol and Alcohol Use

Alcohol is a nervous system depressant and is used in liquid form. It is colourless, inflammable liquid; intoxicant present in wine, beer and spirits (Tobutt, 2016). Alcohol is always drunk in one of the three major classes of alcoholic beverages: beer, wine or hard liquor - also called distilled spirits. These are the main alcoholic beverages common in many countries. Alcohol use is consumption of beer, wines or hard liquor or any other alcoholic beverage. (Maisto, Galizo & Connor, 2010; NACADA, 2010). Alcohol in our society has been consumed with meals, served for medicinal or religious purposes, used to celebrate special occasions, and served as a social facilitator. While most individuals who drink alcoholic beverages do not develop problems with, or dependence on alcohol, many social workers and counsellors encounter high rates of alcohol problems among their clients (Bryd, 2011).

2.2.1 Historical Background of Alcohol Use

Consumption of alcohol is almost as old as humanity. Wines and spirits were used by the Greeks, the Romans and the early Europeans for social and emotional purposes. But it appears the ancient people did not understand the scientific processing of brewing; and wine was more the result of naturally occurring fermentation (Bryd, 2011). The first non-distilled alcoholic beverages were made inadvertently by natural fermentation. The first wines which probably were drunk several thousand years ago, were likely made of fruit juice, contaminated with microbes including yeast. Authorities believe that the first beers were produced in Egypt as long as between 6000 BC and 5000 BC through a process which involved blending water and malt to yield a refined liquid (Maisto et al., 2010; Tamang, 2010).

However, it was not until nineteenth century that people learnt how to extract the active ingredients of alcohol from malt and hops through fermentation and brewing to mass produce alcohol with varying degree of stress (Maisto et al., 2010). In 1800s, alcohol and other psychoactive drugs began to be prescribed and used throughout Europe, the United States and other parts of the world without any controls. Since the beginning of its use, alcohol has been a double-edged sword to the human society. Alcoholic beverages have played a role in important social occasions such as births, religious ceremonies, marriages and funerals. On the other hand, alcohol seemingly always has been consumed in excess by some people, including university students, with some consequent problems to the individual and to the society in which he/she lives (Maisto et al., 2010). In time, excessive alcohol consumption becomes a real social problem (Dowdall, 2012).

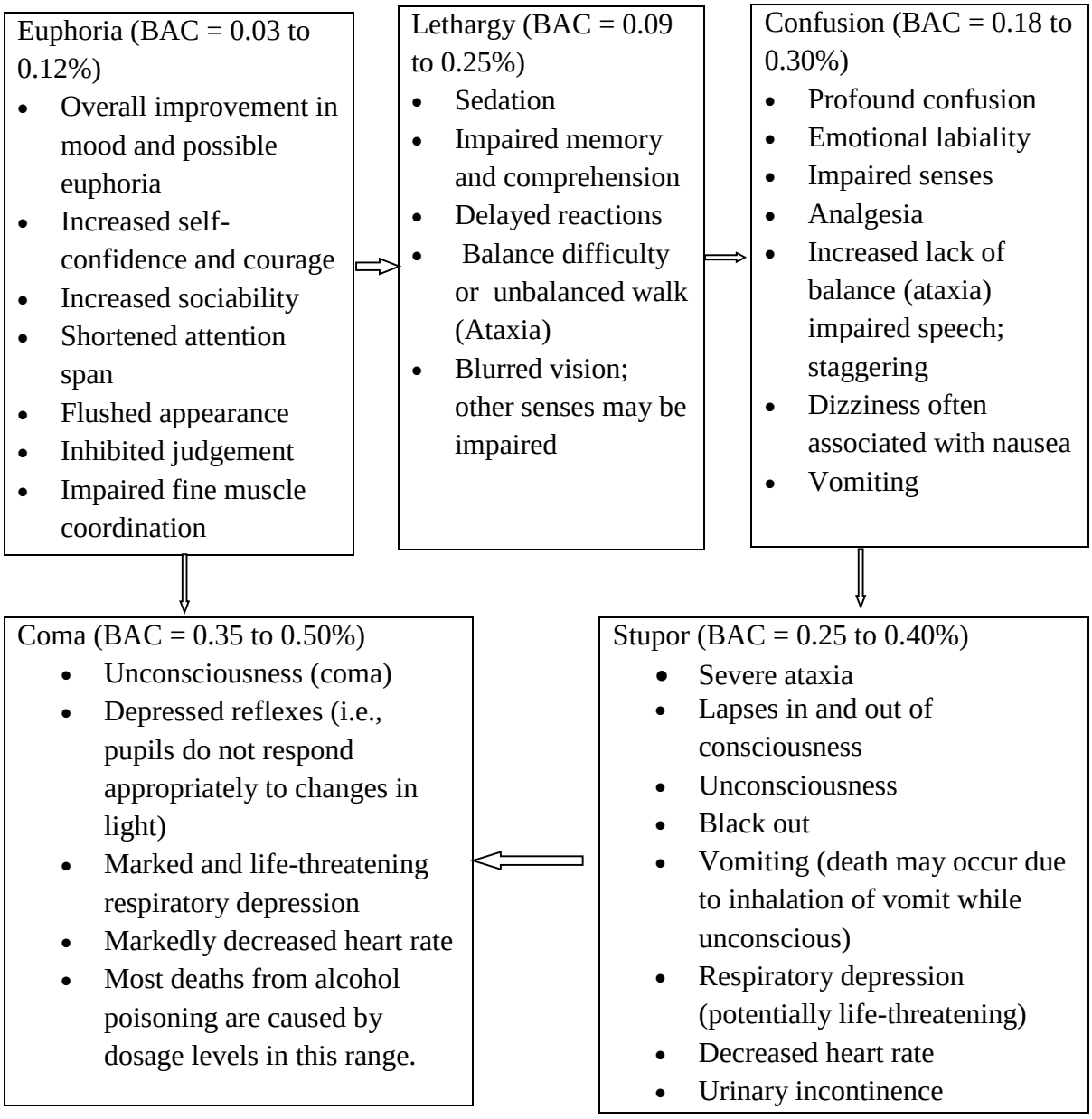
2.2.2 Physiological Effects of Alcohol on the Human Body

The short-term effects of alcohol on the human body can take many forms. Once alcohol is consumed, it exerts its effects by dissolving in lipid membranes which disturbs the normal chemical actions that occur there. That is, it alters the cell membranes anatomy by entering in their internal structure. The result is reduced efficiency of conduction of neural impulses along axons which reduces the action potential amplitudes that reach the synapse. As a consequence, neurotransmitter release and transmission of impulse across synapse are inhibited (Hanson et al., 2014).The psychoactive element of alcohol is ethanol (CH_3CH_2OH); once in the blood stream it is processed by the human body in separate steps. Most of the ethanol in the body is broken down in the liver by an enzyme called alcohol dehydrogenase (ADH), which transforms ethanol into a toxic compound called acetaldehyde (CH_3CHO), a known carcinogen. However, acetaldehyde is generally short-lived; it is quickly broken down to a less toxic compound called acetate (CH_3COO^-) by another enzyme called aldehyde dehydrogenase (ALDH). Acetate then is broken down to carbon dioxide and water, mainly in tissues other than the liver (McGuire & Beerman, 2012).

Alcohol specifically ethanol, as a central nervous depressant, has a range of side effects. Firstly, alcohol affects the part of the brain that controls inhibitions. Drinkers talk more, exude self-confidence, and may become foolish or even rowdy; there is general loss of self-restraint

(Teesson, Degenhardt & Hall, 2014). According to Gazdzinski and Durazzo (2013), the amount of body fat and circumstances of alcohol consumption play a large part in determining the extent of intoxication; for example, consuming alcohol after a heavy meal causes alcohol to be absorbed more slowly. Hydration also plays a role, especially in determining the extent of hangover. Secondly, alcohol generally produces feelings of relaxation and cheerfulness, but further consumption can lead to blurred vision and coordination problems. Cell membranes are highly permeable to alcohol, so once alcohol is in the bloodstream it can diffuse into nearly all biological tissues of the body. After excessive drinking, unconsciousness can occur and extreme levels of consumption can lead to alcohol poisoning and death (a concentration in the blood stream of 0.40% will kill half of those affected). Death can also occur through asphyxiation by vomit (McCall, 2012; Woodward, 2009). Conditions of sleep deprivation correlate positively with increased alcohol consumption.

Acute alcohol intoxicationvia excessive doses generally causes short or long-term health effects. N-methyl-D-aspartates (NMDA) receptors start to become unresponsive, slowing areas of the brain they are responsible for. NMDA are receptors responsible for communication necessary to encode memories, generate thoughts and make decisions. Alcohol also affects the (GABA) receptors which are responsible for restraining neuron activity so that chaotic communication is avoided. Alcohol reinforces GABA activity while reducing NMDA activity, thereby slowing the communication between neurons (Rose & Cherpitel, 2013). Different concentrations of alcohol in the human body have different effects on the consumer. The concentration of alcohol in blood is usually measured in terms of the blood alcohol content. Figure 1 lists the common effects of alcohol on the body, depending on the blood alcohol concentration (BAC). However, tolerance varies considerably among individuals, as does individual response to a given dosage (Alexander, Larosa, Alexander, Bader & Garfield, 2009). Hence, BAC percentages are just estimates used for illustrative purposes.



The arrows on the table above, point to the increasing level of BAC and their corresponding effects

Figure 1. BAC Level and Corresponding Effects.

Adapted from *New Dimension in women Health* (5th ed), by L.L Alexander, et al., 2009, Boston: Jones & Bartlett Learning.

Other effects of excessive alcohol use according to Woodward (2009) are blackouts (anterograde amnesia) and ataxia. Blackouts involve the loss of memory during and after an episode of drinking. Ataxia is lack of muscle coordination during voluntary movements such as walking or picking up objects. This usually comes about as a results of damage to cerebellum — the part of the brain that controls muscle coordination. Ataxia, occurs in the following forms: appendicular, gait, and truncal forms. Appendicular ataxia results in jerky, uncoordinated movements of the limbs, as though each muscle were working independently from the others. Truncal ataxia results in postural instability; gait instability is manifested as a disorderly, wide-based gait with inconsistent foot positioning. Ataxia is responsible for the observation that drunk people are clumsy, sway back and forth, and often fall down

High levels of alcohol consumption are correlated with an increased risk of developing alcohol use disorders, heart problems, malabsorption, chronic pancreatitis, alcohol-related liver disease, and cancers of the upper respiratory tract, liver, colon or rectum, and breast (Rose & Cherpitel, 2013). Although acetaldehyde is short lived, it has the potential to cause significant damage. This is particularly evident in the liver, where the metabolism takes place. Some alcohol metabolism also occurs in other tissues, including the pancreas and the brain, causing damage to cells and tissues. Additionally, small amounts of alcohol are metabolized to acetaldehyde in the gastrointestinal tract, exposing these tissues to the damaging effects of acetaldehyde. Acetaldehyde promotes cancer in several ways - for example, by interfering with the copying (i.e., replication) of DNA and by inhibiting a process by which the body repairs damaged DNA (McGuire & Beerman, 2012). This is particularly very dangerous to an individual who exposes himself to alcohol at a young age such as the university students; this is because, the individual is vulnerable to the effects of the carcinogen – acetaldehyde rather too early. Hence, continued use over life time implies long exposure to this carcinogen causing a variety of cancers in the body of the user. The developing adolescent brain is particularly vulnerable to the toxic effects of alcohol (Wolfe, 2010). Alcohol can cause high blood pressure, create an irregular heartbeat, and enlarge the heart. It can hurt the liver by causing hepatitis, liver cancer, and cirrhosis. Alcohol use over a lengthy time can cause the stomach lining to bleed. It can also put a major strain on the kidneys. Because alcohol can cause brain cells to

die, permanent changes to the brain can result. Some loss of brain activity occurs in all heavy drinkers.

Pregnant women who drink alcohol are at even greater risk of problems (McGuire & Beerman, 2012). Poor nutrition may cause the mother to metabolise alcohol more slowly, exposing the foetus to high levels of alcohol for longer periods of time. Increased exposure to alcohol also can prevent the foetus from receiving necessary nutrition through the placenta. As the chief organ responsible for the breakdown of alcohol, the liver is particularly vulnerable to alcohol metabolism's effects. More than 90 percent of people who drink heavily develop fatty liver, a type of liver disease. Yet only 20 percent will go on to develop the more severe alcoholic liver disease and liver cirrhosis. Alcohol metabolism also occurs in the pancreas, exposing this organ to high levels of toxic by-products such as acetaldehyde. This makes the heavy alcohol users to develop alcoholic pancreatitis, a disease that irreversibly destroys the pancreas (Alexander et.al 2009).

Jasmin (2013) further explains that long term alcoholics suffer from Wernicke-Korsakoff syndrome, a deficiency in Thiamine (Vitamin B1), an essential nutrient required by all tissues, including the brain. Wernicke-Korsakoff syndrome consists of two separate syndromes: a short-lived and severe condition called Wernicke's encephalopathy and a debilitating condition known as Korsakoff psychosis. The symptoms of Wernicke's encephalopathy include mental confusion, paralysis of nerves that move the eyes and difficulty in muscle coordination. Korsakoff's psychosis is characterized by persistent learning and memory problems, being forgetful and quickly frustrated, and having difficulty with walking and coordination.

2.2.3 Socioeconomic Consequences of Alcohol Use

Families, friends, associates and communities, and the entire fabric of society are affected by the problems associated with alcohol and other substance use disorders. People who abuse alcohol often are less productive on their jobs and in class work. Alcohol and other substance use disorders contribute to crime, accidents, car crashes, suicide, homelessness, domestic violence and child abuse (Centre for Disease Control and Prevention [CDC], 2013). National Council on Alcoholism and Drug Dependence (NCADD) (n.d) further reports that alcohol use

and crime are inextricably linked. This is clearly indicated by about three million violent crimes (including rapes and sexual assaults; robberies; and aggravated and simple assaults) that occur each year in which the victims perceived the offender to have been drinking at the time of the offense.

Excess alcohol use results in a high degree of absenteeism, unpunctuality, poor work efficiency, loss of dexterity in skilled jobs or accidents while working with heavy machines which can permanently cripple a worker. Alcoholism among the work force adversely affects the output and income generated by the industry. People with alcohol abuse are known to engage in petty quarrels or fights and maintain strained relationship with peers and superiors further affecting their performance at work. Not infrequently, these problems culminate in the loss of a job which further complicates the family's financial situation (CDC, 2013).

2.2.4 Risk Factors that Predispose One to Alcohol Use

According to Myers and Isralowitz (2011), there are a number of factors that contribute to abuse or use of alcohol; that is they increase the probability of alcohol use. These factors could either be genetic (inherited), personal or environmental. Some genes predispose an individual biochemically to develop alcohol related problems. The environmental factors are many and include home and family life, school and peer groups and other components. Family structures, family dynamics, quality of parenting and family problems can contribute to alcohol experimentation among children and adolescents who continue to use alcohol as university students. Moreover, socio-cultural environment influences alcohol use. That is, environmental risk for alcohol use can stem from one's immediate neighbourhood or from society at large. Personal factors such as personality traits like impulsiveness, depressive mood, or susceptibility to stress; socialization, psychopathology, poor self-efficacy among others can also predispose one to alcohol use and abuse (Manzardo, Goodwin, Campbell, Penick, & Jr, 2008).

2.3 Global Status of Alcohol Use

According to global status report on alcohol and health (WHO, 2014) worldwide, 61.7% of the population aged 15 years or older (15+) had not drunk alcohol in the past 12 months. This

implies that 38.3% of the population aged 15 years or older had drunk alcohol in the past 12 months. This report also documented that females are more often lifetime abstainers than males. Further, worldwide, about 16.0% of drinkers aged 15 years or older engage in heavy episodic drinking. In general, the greater the economic wealth of a country, the more alcohol is consumed and the smaller the number of abstainers. High-income countries have the highest alcohol per capita consumption (APC) and the highest prevalence of heavy episodic drinking among drinkers (WHO, 2014).

Harmful use of alcohol ranks among the top five risk factors for disease, disability and death throughout the world (WHO, 2011). Overall, about 3.3 million deaths in 2012 are estimated to have been caused by alcohol consumption. This corresponds to 5.9% of all deaths, or one in every twenty deaths in the world (7.6% for men, 4.0% for women) (WHO, 2014). In the same year, 5.1% of the global burden of disease and injury, were attributable to alcohol consumption. Beyond the population-level burden of diseases and injuries, harmful use of alcohol kills or disables people at a relatively young age, resulting in the loss of many years of life to death and disability. Despite the large health, social and economic burden associated with harmful use of alcohol, it has remained a relatively low priority in public policy, including in public health policy. Globally, 50.1% of total recorded alcohol is consumed in the form of spirits, followed by beers at 34.8 % and wine comes third at 8.0% (WHO, 2014).

2.4 Alcohol Use Situation in Kenya

A rapid situational assessment of drug and substance abuse in Kenya by NACADA, (2007) indicated that about 14.2 % of adults aged between 15-65 years and 11.7% of the youths aged between 18-24 years were current abusers of alcohol. The report further revealed that illicit brews seem popular among Kenyans: 2% of 10-14 year olds had tasted *chang'aa* at least once in the past, while 15% of 15-64 year olds had used *chang'aa* at least once. However, another recent survey by NACADA (2012) reported a general decline in current use of alcohol among 15-65 years old to 13.6% and among 18-24 years old to 10.2%. While there is a reduction in those reporting current use of packaged/legal alcohol and traditional liquor, there is an increase in those reporting use of *chang'aa*. This shows that illicit brew is becoming popular among Kenyans. This popularity is evidenced by many media reports of the adverse consequences

following consumption of illicit brews. In November 2001, over 140 people died and scores of others lost their eye sight after consuming an illegal ethanol-laced alcoholic drink. In June 2005, illegal brew laced with industrial alcohol caused the deaths of 49 people while more than 174 others were hospitalized after drinking the homemade '*kwona mbee*' (literally: "see the way ahead") brew containing methanol - a toxic wood alcohol added to the concoction to give it more kick (Barasa, 2006). The lethality of the illicit brew was also clearly depicted in 2014 when over a hundred people lost their lives after consuming adulterated brew (NACADA, 2014).

2.4.1 Alcohol Use in Tertiary Institutions in Kenya

A study by NACADA (2006), on drug and substance abuse in tertiary institutions in Kenya, found that students in tertiary institutions use drugs, and especially alcohol due to curiosity, peer pressure, social occasions and personal problems. Peer pressure accounted for 29.9% influence, curiosity 23.0%, and social occasions 35.4%, of the reasons for taking alcohol. This is partly due to the esteem that most societies associate with taking alcohol at party time. The study also found out that very close friends accounted for 55.5% of factors that prompt alcohol abuse among the students. Family members also account for initial use of alcohol among 7.6% of the respondents sampled.

2.4.2 Alcoholic Beverages in Kenya

NACADA (2010) lists the following as the commonly used alcoholic beverages in Kenya: beer, spirits, wines, *chang'aa, busaa, muratina*, banana and other traditional alcoholic beverages. Beer is an alcoholic beverage made by fermenting a cereal (or mixture of cereals) flavoured with hops. Lager beer is the most commonly produced and consumed, though other types of beers are also available in the market. There are various types of spirits in the market and their sale is regulated by the Kenya Wine Agencies Limited (KWAL) and the Kenya Bureau of Standards. Wine is an alcoholic beverage typically made of fermented grape juice. The many types of wines consumed in Kenya originate from South Africa, France, Italy, Spain, Germany, Austria, Chile and America. There is also local production of wine mainly from the Naivasha area.

Chang'aa is distilled liquor made from a variety of grains, malted millet and malted maize being the most common. Its alcoholic content ranges from 20 to 50%. Busaa is a traditional beer made from finger millet malt and is consumed in many parts of the country particularly in Western Kenya. Palm wine *(Mnazi)* is another type of brew consumed mainly at the coastal region (NACADA, 2010; WHO, 2004).

Muratina is made from sugarcane and sun-dried Muratina fruit. The fruit is cut in half, sundried and boiled in water. The water is removed and the fruit sun-dried again. The fruit is then added to a small amount of sugar-cane juice and incubated in a warm place. The fruit is removed from the juice after 24 hours and sun-dried. The fruit is then added to a barrel of sugar-cane juice which is allowed to ferment between one and four days. The final product has a sour alcoholic taste. Banana beer is made from ripe bananas, mixed with cereal flour (often sorghum flour) and fermented to an orange, alcoholic beverage. It is sweet and slightly hazy with a shelf life of several days under correct storage conditions. Urwaga banana beer is made from bananas and sorghum or millet (NACADA, 2010; WHO, 2004).

2.4.3 The Alcoholic Drinks Act, 2010

This Act was assented to on 13th August, 2010 (NACADA, 2012). The Act controls and regulates the production, manufacture, sale, labeling, promotion, sponsorship and consumption of alcoholic drinks. The Act seeks to protect the health of individuals; protect the consumers of alcoholic drinks from misleading and deceptive inducements; protect the health of persons under the age of 18 years; inform and educate the public on the health effects of alcohol abuse; adopt and implement measures to eliminate illicit trade in alcohol like smuggling; promote and provide treatment and rehabilitation programmes; and promote research and dissemination of relevant information. Therefore, the legislation seeks, among other things, to mitigate the negative health, social and economic impact, resulting from the excessive consumption and adulteration of alcoholic drinks. The Act also seeks to legalize the production and consumption of *chang'aa* by repealing the Chang'aa Prohibition Act. It provides for the legalizing of *chang'aa* and its manufacture to conform to prescribed standards as a way of protecting consumers (The Alcoholic Drinks Act, 2010).

Some of the key provisions include prohibition of the sale of alcoholic drinks to persons under the age of 18 years; prohibition of sale of alcoholic drinks in sachets or in a container less than 250 ml; and provision of mandatory warning labels on information and potential health hazard as well as a statement as to the constituents of the alcoholic drink. Such health warnings and messages include: excessive alcohol consumption is harmful to your health, excessive alcohol consumption can cause liver cirrhosis (liver disease) and not for sale to persons under the age of 18 years (NACADA, 2012).

2.4.4 Use of Illicit Brews in Kenya

Consumption of illicit brew is entrenched in many communities and especially the slum areas of the country. Okungu (2010) reports that hundreds of Kenyans have been either blinded or killed by deadly illicit brews in recent years. This started in Kenya's sprawling slums where life is known to be more difficult and less bearable all year round. In such circumstances, men gradually give up family leadership and take to drinking cheap but potent local brews to temporarily make them forget their miseries. In these dens, the more men drink, the more they get addicted and the more they stop being financially and sexually productive. Illicit drinks are being sold openly in major towns, for instance in both Nairobi and Kiambu where the banned brews killed many youths and left scores blind, the drinks had found their way onto bar counters (Mugo, 2012). These brews come with various names. According to Mugo, a spot check by the Daily Nation, indicated that there were more than 14 brands of the brews in the market at the time including Visa, Flying Horse, Metropolitan, Prince, Royal and Explorer.

Njagi, (2011) reported that illicit brew has been a concern even to the executive arm of the government. The former president of Kenya, Mwai Kibaki, had earlier expressed concern over the growing menace of illicit brews in the country and directed the provincial administration to deal decisively with the issue. He said that the sale and consumption of the illicit liquor had led to loss of several lives especially in Central Kenya. The president was speaking in Nyahururu town in response to the death of 28 people who had died in Ol Kalau and Ruiru after consuming illicit brew. The sale and use of illicit brew has persisted in the country and has continued to cause great harm and many deaths to the Kenyan citizens. In 2014, for instance, 102 people died and over 150 were hospitalized after consuming lethal illicit brew in

different counties in the country (NACADA, 2014). This was occasioned by availability and affordability of cheap illicit brew and second generation alcohol in the Kenyan market. It was in the interest of this study to also establish the alcoholic beverages mostly consumed by the students in the universities, because, they are also vulnerable to such killer brews.

2.4.5 Ban of Second Generation Alcohol in Kenya

According to Otieno (2015), second generation alcohol refers to alcoholic beverages that are made simply by mixing neutral spirit, water and flavours. These alcoholic drinks do not go through fermentation and/or distillation processes at the bottling companies. Second generation alcoholic beverages are low priced and have high alcohol content. Due to the immense damage caused by these drinks, the government suspended the sale of second generation alcohol in the country. After this directive, Kenya Bureau of Standards (KEBS) suspended operation licenses for 385 alcohol brands that were termed as second generation spirits ("allAfrica.com: Kenya: Kebs Suspends Licences for 385 Drinks," n.d.)

2.4.6 University Students Profile in Kenya

The total enrolment in Kenyan universities has increased from 3443 students in 1970 to over 130,000 students in 2006 (20,000 in private universities and 110,000 in seven public universities) (Waema & Wamburi, 2009). According to UNESCO (2005), private university students account for 20 per cent of the total university population in Kenya. The enrolment in public universities has been on the increase. According to Mwiria (2007), enrolment in public universities stood at to 31,600 students in 1990/91 academic year and 77,000 in 2005, of which roughly 33,000 were privately sponsored. In private universities, the total enrolment in 2003/04 was 9,540 (5,128 females and 4,412 males). These figures of undergraduate students have since increased exponentially to 48,648 in private universities and 240,711 in the public universities in the year 2013/2014 according to Kenya National Bureau of Statistics ("Sectoral Statistics - Sectoral Statistics," n.d.). These figures show that public universities still have higher number of students than private universities.

2.5 Prevalence of Alcohol Use in Universities

Alcohol is the substance of choice among university students who are at a critical developmental phase, a time when substance use experimentation and heavy drinking reach

their peak (Ghandour et al., 2009). Goldman (2002), notes that alcohol use and misuse in universities and college campuses is not new. Anecdotal reports go back many years, and there is documentation in the United States for at least 50 years. Goldman (2002), further notes that approximately 80% of college/university students drink and that half of college student drinkers engage in heavy episodic drinking. Data from a 2012 National Survey on Drug Use and Health (NSDUH) (Office of Applied Studies, 2012), indicate that among full-time university students (referred to as college students) in the USA, 60.3 percent were current drinkers, 40.1 percent were binge drinkers, and 14.4 percent were heavy drinkers. The pattern of current alcohol use, binge alcohol use, and heavy alcohol use among full-time university students compared with rates for other non-college students were relatively higher.

A greater percentage of 18-24 year-old college/university students compared with non-college respondents engage in binge drinking. This excessive alcohol intake among college students is associated with a variety of adverse consequences: fatal and nonfatal injuries; alcohol poisoning; blackouts; academic failure; violence, including rape and assault; unintended pregnancy; sexually transmitted diseases, including HIV/AIDS; property damage; and vocational and criminal consequences that could jeopardize future job prospects. Students who engage in excessive drinking impact not just themselves, but also the fellow students who experience second-hand consequences ranging from disrupted study and sleep, to physical and sexual assault. Furthermore, the institutions they attend expend valuable resources to deal with institutional and personal consequences of their behaviour (Correia, Murphy, & Barnett, 2012). In China, there is a trend towards risky drinking among Chinese college (university) students. A study carried out by Cheng-Ye, Pei-Jin and Yi (2012), on alcohol use and misuse among university students, revealed that 80.8% were lifetime drinkers, 49.3% were current drinkers (drank alcohol in past 30 days) and 23.5% were binge drinkers (drank five or more drinks in a period of 2 hours). This study shows that the prevalence of currents users and binge drinkers are relatively lower than those of their counterparts in the USA.

Empirical data on the prevalence and patterns of alcohol use among university students in Africa is still limited. A study carried out at Mbarara University in Uganda indicated that almost half of the students had consumed alcohol in the previous 12 months, and a quarter of

them had engaged in heavy episodic drinking (Stafstrom & Agardh, 2012). Young and de Klerk (2008), studied the patterns of alcohol usage on a South African university campus, and found that 33.4% were hazardous drinkers, 7.8% harmful drinkers and 9.0% probable alcohol dependent. Among the few studies from universities and colleges in Kenya, Odek and Pande (1999) reported high rates of substance use among students at a Kenyan private university, with rates as high as 84% for lifetime alcohol use while 11.5% were regular users. Further, another study by Atwoli, et al. (2011), on substance use among college and university students in Eldoret municipality, revealed that 51.9% of the students surveyed were lifetime alcohol users and 97.6% of alcohol users had consumed alcohol in the week prior to the study. These studies were mostly done in public universities and only a few in Kenya. However, there is still a dearth of literature on the levels of use among students in private faith based universities. Since these universities are unique in many ways (Wells, 2010) and their environments are usually alcohol and drug free zones, it was in the interest of this study to establish whether these policies, and by virtue of being religious universities, are protective of alcohol use among the students.

In every state there is a basic distinction between private and public universities. The main difference between private and public institutions of higher education is that no governmental entity is involved in private universities. Consequently they do not receive public funding, but are entirely dependent on tuition fees and private funding, for instance through alumni or companies outside the university. Tuition fees at private universities are therefore considerably higher than at public institutions. Public universities, on the other hand, receive funding from the government ("Types of Universities, n.d"). Some of the private universities in Kenya are faith based. That is, they are affiliated to a certain religious faith; say Christian, Hinduism or Islam. According to Baker (2008), religious affiliated universities such as the Christian-based provide a greenhouse environment that is both protected, and yet not isolated from the world around them. Students in this kind of environment are prohibited from several common elements. They are required to attend religious meetings and in varying degrees to abstain from alcohol and illegal drugs, premarital sex, viewing pornography, among others.

Very limited studies have been done to find out the effect of this kind of religious environment on the levels of alcohol use among university students in comparison to their counterparts in public (state owned) universities. Among these few studies is one done by Helm, Boward, McBride, and Del (2002), that found out that students in conservative religious sub-cultural settings, tend to exhibit less substance use overall compared to students in other university settings. This, according to Ghandour et al. (2009) is attributed to the fact that students belonging to such conservative religious settings may be shielded from the opportunity to try alcohol. Empirical data is still lacking on the prevalence of alcohol use among students in faith based universities in Kenya. This study therefore sought to fill this gap while assessing whether prevalence of alcohol use is associated with being in private faith based or public university.

2.5.1 Prevalence of alcohol use across Demographic Factors

Prevalence of alcohol use among university students is as a result of interaction with a number of socio-demographic factors. In particular, gender, place of residence and the year of study have been closely linked to prevalence levels of alcohol use in the university environment. Being male, for instance, is associated with drinking alcohol, consuming higher amounts of alcohol and the likelihood of becoming alcohol dependent in comparison with females (Coll, Draves & Major, 2008; Sebena, Orosova, Mikolajczyk & van Dijk, 2011;. Abayomi, Onifade, Adelufosi, & Akinhanmi, 2013). Sebena et al., for instance observed that 77.0% and 32.3% of the male students in four universities in Slovakia were heavy episodic drinkers and problem drinkers respectively, compared to 30% and 14.3% of female students. Coll, Draves, and Major, (2008) also established that male students drank significantly more often and in greater quantities than did the female students. Similarly, Seguel et al. (2012) observed that alcohol use in one university in Chile was higher among male students than among female students.

Living in the students hostels is associated with higher consumption of alcohol compared with living with parents (Seguel et al, 2012). Bulmer, Irfan, Mugno, Barton, and Ackerman, (2010) also observed that students living on-campus consistently indicated higher alcohol consumption frequency and volume compared to those living off-campus. On the other hand, Valliant and Scanlan, (1996), had earlier found out that the likelihood of being addicted to alcohol was more prevalent among university students living off campus but not with parents.

Özgür İlhan, Yıldırım, Demirbaş, and Doğan, (2008) also later found out that a significantly smaller number of students living in university hostels consumed alcohol in comparison to students living outside campus. A higher year of study has also been associated with lower levels of alcohol use (Sebena et al., 2011). Similarly, Özgür İlhan et al., (2008), had earlier found out that among the students who had used alcohol a year prior to their study in five universities in Turkey, majority of those who were using alcohol once a month or more frequently were fourth years (68.3%). However, Sebena et al. (2011), and Young and Klerk, (2008) found out that a higher study year was associated with lower levels of alcohol use. This study sought to establish the prevalence of alcohol use across these socio-demographic factors among students in both private faith based and public universities in Kenya.

2.6 Patterns of Alcohol Use among University Students

The patterns of use of alcohol among these university students are varied and are related to parties, celebrations, graduation parties, and holidays. Alcohol is often central to the social and sporting life of students, and undoubtedly plays an integral role in socialization and rites of passage in colleges and universities (Maria et al., 2008; Cheng-Ye, Pei-Jin & Yi, 2012). Alcohol as a substance of choice among university students (Ghandour et al., 2009) is consumed at varied levels. These include health, social/low risk, binge, and dependent drinking (Bento, 2009). Social drinking mostly occurs in social situations such as parties, dinners and during joyous situations (Goldberg, 2013). A binge drinker is a serious risk to him or herself. Binge drinking can lead to alcohol poisoning leading to death, can cause uncontrollable mood swings, is very expensive and addictive and can lead to alcoholism (Abadinsky, 2008). These patterns of drinking according to Hanson et al. (2014), usually occur in the following settings: fraternity parties, athletic events, in residence halls, and in bars adjacent to campus. In Africa, Choudhry, Agardh, Stafstrom and Ostergren, (2014) also established that alcohol use among university students in Uganda is mostly during celebrations.

According to Lorant et al. (2013), the drinking patterns of many university students is one of episodic excess and intoxication or binge drinking. Morton and Tighe (2011) documented that binge drinking in young adults at university is a growing problem in Britain. Their study revealed that 92.5% of the students were binge drinkers. This pattern of heavy

episodic/hazardous drinking has also been reported among university students in China (Kim et al., 2009), in the US (Trostler, Li & Plankey, 2014) in South Korea (Sa, Seo, Nelson, Lohrmann & Ellis, 2015) and in Canada (Flett et al., 2008).

University students in many developed countries report high levels of hazardous alcohol consumption, though quite a number report low risk levels of alcohol use (Akmatov, Mikolajczyk, Meier Kramer, 2011; Heather et al., 2011; Kypri et al., 2009). Burns et al., (2015), for instance reported that among the Australian university students who had consumed alcohol in the 12 months preceding the study, 60.3% were low risk users, 32.6% were hazardous users, 4.4% were harmful users while 2.7% were dependent. A different study carried out by Young and Klerk, (2008) in Rhodes University in South Africa, revealed that the levels of low risk, hazardous, harmful and dependent use were 48.8%, 32.8%, 8.5% and 9.9% respectively. Similarly, a study by Utpala-Kumar and Deane, (2012) on current alcohol users among university students in the University of Wollongong revealed that majority (38.4%) were harmful users, followed by hazardous (34.4%) and low-risk users (27.2%). There is still dearth of literature in regard to these levels of alcohol use among university students in Kenya. The AUDIT scale was therefore used in the present study to determine the prevalence of low risk, hazardous, harmful and dependent levels of alcohol use among students from both private faith based universities and public universities. According to Akmatov et al. (2011)0, 20% of the university students in 16 universities in Germany displayed problem drinking behaviour. In Africa, Pengpid, Peltzer, and Van Der Heever, (2013) also observed that 22.2% of the students in one public university in South Africa were problem drinkers. This implies that problem alcohol use is not only a concern in the general population but also among university students. However, empirical data on the prevalence level of problem drinking among university students in Kenya is still unavailable. This study intended to fill this gap and establish the relationship of prevalence of problem drinking between students in private faith based universities and those in public universities.

Alcohol use is not just learnt while in the university but it is a behaviour acquired way before admission to university. Liang, Chikritzhs, and Lee, (2012) documented that most of the youthful alcohol users in Australian universities began using alcohol way before joining

college or university. O'Grady, Arria, Fitzelle, and Wish, (2008) further point out that early onset of alcohol use is associated with development of alcohol use disorders and involvement in other illicit drugs. Similarly, Thombs, O'Mara, Tobler, Wagenaar, and Clapp, (2009), also noted that among the university students sampled in a university in the USA, who displayed risky behaviours as a result of alcohol use, they had begun drinking alcohol in primary and secondary level of education. Majority began taking alcohol while in 12^{th} grade and a significant number in the 7^{th} grade. This suggests that drinking onset is an important variable in a chain of associations leading to increased levels of alcohol involvement in young adulthood. In line with these findings, Tesfaye, Derese, and Hambisa, (2014) also observed that majority of the alcohol users among the university students in Ethiopia started to drink before joining university and minority after joining university. Limited data is available on the age of onset of alcohol use among university students in Kenya. It was therefore in the interest of this study to fill this gap. Information on the age of initiation to alcohol use is very key in informing the level and type of counselling interventions to be put place. It was also in the interest of this study to establish whether there was any statistically significant relationship between age of onset of alcohol use among the students and being in a private faith based university or in a public university in Kenya.

Friends and family have a significant place in terms of initiation of alcohol use. Houghton and Roche, (2013) noted that drinking among the youth is either a family activity or a peer activity. Parents, siblings and other relatives are very strong models in initiation of alcohol use especially when a child becomes aware of the family members' drinking. As the child transits from childhood to adolescence the peer group strongly influences the behaviour. Jones and Magee, (2014) and NIAAA (2009), also confirmed that having friends, or siblings who drink is associated with early onset of alcohol use by the adolescents. A study done in Australia among university students established that all the respondents involved in the study had been introduced to alcohol at home (Hernandez, Leontini, & Harley, 2013). In Kenya, a study on alcohol use among high school students revealed consistent findings that friends and family have a significant influence in terms of initiation to alcohol use, according to 39% and 23% of the respondents respectively (NACADA, 2010). This study intended to establish significant

persons in the initiation of alcohol use among students in both private faith based universities and those in public universities.

Bars/night clubs and parties represent the actual drinking situations and environment within which university students in USA drink and experience alcohol related problems. While some based on other contextual factors drink from the privacy of their homes or rooms (Clapp, Reed, Holmes, Lange, & Voas, 2006; Clapp et al., 2007). Similarly, a different study conducted in six universities in New Zealand revealed that pubs, bars and nightclubs were major outlets of alcohol for the students; and students tend to drink heavily in such settings (Kypri, Paschall, Langley, Baxter & Bourdeau, 2010). Kypri, Bell, Hay, and Baxter, (2008) had earlier established that any alcohol outlet within 1 km of university students' residence is associated with increase in alcohol related problems among drinkers (e.g. blackouts or episodes of physical aggression) and very many second-hand effects (e.g. being insulted or humiliated or having property damaged). Hingson, (2010) later found an association between increased alcohol related problems with higher alcohol outlet density, and that reducing alcohol outlet density may in turn reduce drinking related problems. It was in the interest of this study therefore to establish the specific sources of alcohol for students in private faith based and public universities in Kenya with an aim of recommending measures to be put in place to control alcohol use among students.

White and Rabiner, (2011) have documented that weekends begin on Thursdays in many colleges and universities in the USA. Excessive drinking begins on Thursdays relative to other weekdays in one public university in the USA, and this was strongly moderated by Friday class schedules (Wood, Sher, & Rutledge, 2007). Additionally, Finlay, Ram, Maggs, and Caldwell, (2012) also found out that alcohol use among the university students sampled primarily occurred on Thursdays, Fridays or Saturdays. Further, a study done at the University of Missouri-Columbia titled "College Student Alcohol Consumption, Day of the Week and Class Schedule" concluded that students with no Friday classes drank approximately twice as much on Thursdays as students with early Friday classes("MU Study Finds that Friday Class Schedules Influence Drinking Habits; MU News Bureau," n.d.). Southern Methodist university for instance, in response to 'Thirsty Thursdays phenomenon', recommended an increase in

Friday classes to reduced excessive drinking on Thursdays (Go, 2008).

While drinking alcohol has been considered a Thursday through weekend activity, Hensel, Todd and Engs, (2014), interestingly noted a preference for spirits and hard liquor among university students in a South-western University in the USA. They attributed this to a number of factors: Hard liquor is less expensive than beer making it a cheaper way to become intoxicated. It can be mixed with sweet drinks to cover the taste and it does not require acquiring a taste for the drink as beer does. On the other hand, Welcome, Razvodovsky and Pereverzev, (2011) observed a preference for beer among students (especially the Slavs) in three Canadian universities. This study also sought to establish the days of the week when university students in Kenya consume alcohol as well as their alcoholic beverages of choice.

2.6.1 Factors Influencing Alcohol Use in Universities

Students' drinking habits are influenced by a combination of personal and environmental factors. Relevant personal factors include family influences, personality, and a person's biological or genetic susceptibility to alcohol abuse. In addition, many students arrive at college with pre-existing positive expectations about effects of alcohol and often with a history of alcohol consumption (NIAAA, 2002). Certain campus characteristics also reinforce the culture of university drinking. Rates of excessive alcohol use are highest at colleges and universities where Greek systems (i.e., fraternities and sororities) dominate, those where sports teams have a prominent role, and at schools located in the Northeast region of USA. Tolerance of student drinking may permit alcoholic beverage outlets and advertising to be located near campus. Likewise, there may be lax enforcement of the laws prohibiting alcohol sales to persons below the minimum legal drinking age and penalizing underage students who use fake IDs to obtain alcohol (NIAAA, 2002). A study conducted in one Welsh university documented that students who drank alcohol did so mostly when socializing or hanging out with friends who drink. Other circumstances leading to alcohol use identified in the study included to have fun, to be more confident and as a source of relaxation (Faulkner, Hendry, Roderique & Thomson, 2006). Similarly, a different study done in a private university in Thailand revealed that students mostly consumed alcohol as a source of fun. Other events leading to alcohol use included campus parties, birthdays and New Year celebrations (Poonruska, 2011). In Britain, Morton and Tighe (2011) also established that university students in Coventry University used

alcohol to socialize, for pleasure, to feel intoxicated, for enjoyment of taste, because of the cheap cost of alcohol and student alcohol promotions.

Similar factors have been identified in universities in Africa. For instance, in an Ethiopian university, factors identified by Tesfaye, Derese and Hambisa, (2014) as leading to alcohol use included: to get personal pleasure, to get relief from tension, due to peer influence, to stay awake, to be sociable, to increase pleasure during sex, to increase academic performance, due to academic dissatisfaction, to get acceptance by others and due to religious practice. Similarly, students in a Nigerian university use alcohol to enhance sexual performance, boost confidence and reduce stress (Dumbili, 2013). It was in the interest of this study to establish whether these are the same factors that influence alcohol use among the students in universities in Kenya.

2.7 Effects of Alcohol Use among University Students

Alcohol use and abuse among university students is associated with a number of adverse effects. In the USA for instance, 1,400 students aged 18-24 die annually from alcohol-related unintentional injuries. These deaths are related to falls, burns, drowning, alcohol poisoning, and other accidents. About 600,000 are unintentionally injured under the influence of alcohol, more than 696,000 are assaulted by other students who had been drinking; more than 97,000 students are victims of sexual assault or date rape; 400,000 had unprotected sex and more than 100, 000 have been too intoxicated to know if they consented to having sex; more than 150,000 students develop alcohol related health problems and between 1.2% and 1.5% of students indicate they tried to commit suicide within the past year due to drinking or drug use (Hingson & White, 2010). Self-report surveys also provided additional evidence of the multiple adverse effects of alcohol use among university and college students. Blackouts are one of the most common effects of heavy alcohol use, with a number of surveys finding that 25%-50% of students report memory loss on at least one occasion after drinking. Nearly 50% of college students who use alcohol reported hangovers, abdominal pain, and vomiting during heavy drinking episodes (Myers & Isralowitz, 2011).

The existing literature further indicates a strong association between alcohol consumption and having multiple or casual sexual partners as well as alcohol use and the decision to have sex in

the first place (Dowdall, 2012). The effect of high-risk alcohol use on roommates and other members of a university community is another aspect of alcohol use on campuses (O'Malley & Johnston, 2002). Nearly 30% of students report being involved in a fight or argument while drinking in the previous 12 months. Data collected from the College Drinking Survey (Wechsler, 1998) found that 13-27% of students reported being assaulted, hit or pushed by another student who was drinking. In the same study, 8% reported damaging university property or setting off a fire alarm. Five to ten percent of the students reported being involved with campus or community police for incidents involving alcohol. A study carried out in eight universities in New Zealand indicated that the most prevalent problems as a result of alcohol use were having a hangover (55%), blacking out (33%), and vomiting (21%). Twelve percent of students reported having an argument and 5% reported physical aggression in relation to alcohol use. About 6% reported having unprotected sex and 9% had sex they later regretted. Four percent reported being removed from a pub because of drunkenness and 5% reported vandalism. Ten percent of students reported either drink-driving or being a passenger of a drank-driver (Kypri et al., 2009). In Kenya, a study done by Atwoli et al. (2011) showed consistent report of the problems associated with alcohol use among college students within Eldoret Municipality. About 55.2% reported having experienced medical problems as a result of their alcohol use. Further, 60.5% engaged in unprotected sex and 62.5% engaged in sex they regretted the next day. Over 60% of the participants reported engaging in scuffles, loss and damage to property and quarrels. This study involved 3 tertiary colleges and one campus of a public university in one geographical area. This study was therefore meant to provide more empirical data on the effects of alcohol use among students in both private faith based and public universities in Kenya.

2.7.1 Second-hand Effects of Alcohol Use among University Students

Alcohol use by students not only impacts the young drinkers themselves but often affects the people around them. The second-hand effects of alcohol can include, for example, that the drinking of others leads to interrupted sleep or study, being insulted, property damage, violence, and unwanted sexual advances. A study carried out in the US in 18 four-year colleges revealed that, among those surveyed, 27.4% have been humiliated, 16.5% quarrelled with a drank student, 9.4% were assaulted, 14.4% had their property damaged, 56.4% had to baby sit a drank student, 63.9% had interrupted sleep or studies, 16.3% had sexual advances and 1.3%

were victims of rape or sexual assault from drank students (Nelson, Xuan, Lee, Weitzman, & Wechsler, 2009). In Vietnam, Diep, Knibbe, Giang, and De Vries, (2015) also observed that, of those surveyed 59.2% had sleep disturbances, 22.7% had their property damaged, 59.3% were distracted from their studies, 48.3% were insulted or involved in a quarrel, 21.0% were beaten, pushed, fought or hit, 20.0% involved in a traffic crash/accident involving a drank student and 8.4% had unwanted sexual advances. Such high levels of second-hand effects imply that alcohol users are a nuisance to their fellow colleagues; hence the policy makers need to put in to consideration how to make the university a comfortable place for all the students. Since these studies were mainly conducted in public universities outside Kenya, this study sought to establish whether university students in Kenya experience these second-hand effects and whether or not the policies in private faith based universities are protective of non-alcohol users.

2.8 Interventions for Alcohol Use in Colleges and Universities

There are a variety of interventions to alcohol use. The type of intervention adopted varies from one individual to the other based on the level of alcohol use. The choice of which intervention to use depends to a large extent on the severity of the problems being addressed. For instance interventions appropriate for individuals who are not dependent on alcohol may not be effective on those who are dependent or severe problem drinkers (Kilmer & Logan, 2012). There is no single intervention or treatment approach that is appropriate for all individuals. Hence, matching treatment settings, interventions, and services to each individual's particular problems and needs is critical to his or her ultimate success in returning to productive functioning in the family, workplace and society. For any intervention to be effective it should be immediately available and one that attends to multiple needs of the person being attended to and not just alcohol use (Goudriaan & Sher, 2012).

Studies of mandated populations have shown that the use of skills-based interventions and motivational interviewing are effective in reducing alcohol related problems. These involve teaching students about the risks of drinking (for example, the value of avoiding excessive drinking to achieve their academic and career goals) and showing students how to monitor

their drinking, how to set limits and reduce their risks of drinking too much, and how to handle high-risk situations in which drinking is prevalent (Borsari, 2005; NIH, 2007).

Treatment or interventions applied on individuals with alcohol abuse and dependence are more intense and longer than those interventions applied on social drinkers. According to the DSM-IV definition, a person is said to be alcohol dependent if he/she has at least three of the following six symptoms within a 12-month period for a positive diagnosis of alcohol dependence: tolerance in which increasing amounts of alcohol is needed to produce the desired effect in a given individual; Withdrawal symptoms due to the absence of alcohol: characterized by a number of physiological symptoms, most commonly tremor, anxiety, sweating, agitation and restlessness, nausea, and diarrhoea; Salience of drinking: a dependent individual's drinking occupies higher priority than other interests or obligations. Typically, hobbies and interests, once important, are put aside to make room for a greater focus on drinking; Craving: an individual's compulsion to drink, triggered by any number of external cues; Impaired control: an individual's lack of control over drinking and difficulty setting consumption limits and; continued harmful drinking despite awareness of the adverse effects (Hanson et al., 2014). For individuals who are diagnosed with alcohol dependence, treatment may be appropriate.

Due to alcohol related traffic and other unintentional injuries and deaths among 18-24 year old students, university administrators in different parts of the world have put in place interventions to reduce excessive drinking. There are numerous individually oriented counselling approaches, environmental interventions and comprehensive community interventions that can reduce drinking and related problems among college/university students (Miller, 2013a). One of the most common interventions to student drinking by universities has involved education/information-based prevention methods (NIAAA, 2002). However, informational intervention only has not been effective. Other interventions employed especially in the universities in the USA that have proved effective include, brief interventions (Krupski et al., 2012; Mc Queen, et al. 2011) and motivational interviewing (Carey, 2012), alcohol skills training programme (MacMaster, Holleran & Chaffin, 2013), computerized interventions such as web-based approaches (Campbell & Hester, 2012; Walters &

Neighbours, 2011), campus-community partnership (Fairlie, Erickson & Wood, 2012) use of peer to peer education and counselling (Dietz, 1991; Grossman, 1994; Hunter, 2004).

2.8.1 Brief Intervention Approach

Brief interventions or short, one-on-one counselling sessions are ideally suited for people who drink in ways that are harmful or abusive (NIAAA, 2005; Zgierska & Flemming, 2009). Unlike traditional alcoholism treatment, which lasts many weeks or months, brief interventions can be given in a matter of minutes, and they require minimal follow up. Brief interventions generally aim to moderate a person's alcohol consumption to sensible levels and to eliminate harmful drinking practices (such as binge drinking) rather than to insist on complete abstinence from drinking, although abstinence may be encouraged, if appropriate (NIAAA, 2005).

Brief intervention and early identification programme emphasizes that it is possible for individuals to modify their problematic drinking patterns (Maisto et al., 2010). Inherent in this approach is the notion that it is possible for individuals to learn to drink responsibly, especially if they are diagnosed early and before problems have become severe. Brief interventions have been tested across cultures and have been found to be widely effective at reducing problematic drinking. They have also been successfully applied in the treatment of diverse populations, including young people with problem drinking patterns. Another advantage of this approach is that it is quick and efficient to administer and can therefore be implemented in settings where resources may be scarce. A number of reviews (Kaner et al., 2007; McQueen et al., 2011) done on the effectiveness of brief intervention to alcohol use have shown that brief interventions consistently produced reductions in alcohol consumption. The first randomized trial to evaluate the effectiveness of a brief intervention for hazardous and harmful alcohol use among university students in Africa by Pengpid et al., (2013) suggests that brief intervention can help reduce levels of hazardous and harmful alcohol use in those students attending brief intervention sessions in South Africa. From 6 and 12 months follow-up, alcohol consumption declined significantly over time across treatment groups. It is in the interest of this study therefore to establish whether this intervention is practiced in universities in Kenya.

2.8.2 Motivational Interviewing Approach

Motivational interviewing (MI) is a directive, client-centred counselling style of eliciting behaviour change by helping clients to explore and resolve ambivalence. Compared with non-directive counselling, it is more focused and goal-directed. The examination and resolution of ambivalence is its central purpose, and the counsellor is intentionally directive in pursuing this goal (NIAAA, 2005)**.** Motivational interviewing approach centres on the idea that individuals with problematic drinking patterns may recognize the negative aspects of their behaviour, but need assistance in making the decision to change. This is achieved through motivational techniques to encourage the client to set realistic and attainable goals, using positive feedback to encourage and sustain progress and change. The approach is oriented toward drinkers with problems, but not severe dependence, and its final goal is a changed drinking pattern rather than abstinence (ICAP, 2010).

A study by Gray, McCambridge and Strang (2005) on the effectiveness of motivational interviewing in reducing drinking, cigarette and cannabis smoking among young people revealed that those receiving motivational interviewing reduced the number of days per month which they drank alcohol. A further experimental study of college/university students attending a student health clinic, found that students screened for heavy episodic drinking who received a two-session motivational counselling intervention had a significant reduction in alcohol use after 3 and 6 months follow-up (Miller, 2013b). Hence if this is adopted in Kenyan universities, where students using and abusing alcohol are identified and treated with MI, then, there may be a possibility of reduction of alcohol associated harm due to reduced intake of alcoholic substances.

2.8.3 Alcohol Skills Training Program (ASTP)

This is a cognitive behavioural programme whose key underlying elements include application of cognitive-behavioural self-management strategies, the use of motivational enhancement techniques and the use of harm reduction principles. These strategies aim to change drinking behaviour and associated lifestyle habits through enhancing the effectiveness of coping responses, building and bolstering skills, and increasing self-efficacy for behavioural self-management. Except in the case of severe alcohol dependence, goals are tailored to the needs of the individual. Clients are encouraged to build a balanced lifestyle. “Healthy addictions”

such as aerobic exercise, meditation and other stress-reducing practices are encouraged (Kilmer & Logan, 2012). The content of ASTP is based on cognitive-behavioural strategies such as setting drinking limits, monitoring one's drinking, rehearsing drink refusal, and practicing other useful new behaviours through role play (Stimson, Grant, Choquet & Garrison, 2006). Various studies evaluating the effectiveness of ASTP in reduction of harmful use of alcohol, have demonstrated the efficacy of ASTP strategies in reducing student drinking and alcohol-related harm (Kilmer & Logan, 2012; Stimson, Grant, Choquet & Garrison, 2006; Kivlahan, Marlatt, Fromme, Coppel & Williams, 1990; Baer, Marlatt, Kivlahan, Fromme, Larimer & Williams, 1992).

2.8.4 Campus–Community Partnerships

Historically, research has demonstrated that broad-based, community-level interventions can reduce problems such as youth access to alcohol, underage drinking, heavy drinking among adults, and drinking while driving. The results have shown reductions in alcohol problems. For example, one study examined the effectiveness of a prevention approach targeting specific neighbourhoods. That intervention, called the Sacramento Neighbourhood Alcohol Prevention Project (or SNAPP), was designed to reduce access to alcohol, drinking, and related problems in two low-income, predominantly ethnic minority neighbourhoods. The study focused primarily on youth and young adults ages 15–29. SNAPP combined interventions that centered on raising awareness, mobilizing community action, and creating responsible beverage services. The result was a reduction in alcohol-related problems such as assaults and motor vehicle crashes (NIH, 2007). Results from other studies on the effectiveness of campus-community environmental alcohol prevention initiative on college students, found out a significant reduction of high-risk drinking, driving under the influence of alcohol and other alcohol related harm on the experimental colleges (Miller, 2013b; Saltz, 2011; Nelson, Weitzman & Wechsler, 2005). This therefore implied that campus-community based environmental alcohol prevention is a promising approach for reducing alcohol-impaired motor vehicle crashes and other alcohol related problems among this population. It was in the interest of this study to establish whether this is one of the interventions put in place in the sampled universities. This could also be used to reduce any other alcohol-related harm in the Kenyan universities.

2.8.5 Psychological Therapy and Aversion Therapy

Psychological therapy and aversion therapy are also used to reduce problematic drinking (Coon & Mitterer, 2012). Psychotherapy or counselling is employed as an approach for general drinking problems and also for alcohol dependence. Counselling alone is seldom enough to bring about change in drinking behaviour (Tobutt, 2011). However, Tobutt (2011) notes that good use of counselling skills is very essential in building a trusting relationship with clients. This is based on empathy, the use of open-ended questions, reflective listening, affirmations and summarising.

One form of therapy based on behavioural therapy principle is community reinforcement technique. This approach includes behavioural techniques designed to support the individual in overcoming dependence. In general, it is most appropriate for those who are alcohol-dependent or have severe problems. The approach identifies high-risk situations that encourage and contribute to the individual's problematic drinking and endows the patient with skills aimed at problem solving and at avoiding such situations. Skills include vocational training, recreational activities, marriage counselling, and avoiding situations where the risk for drinking and drunkenness is high. The patient is also taught skills to avoid relapse (International Centre for Alcohol Policies [ICAP], 2010). Aversion therapy relies on associating alcohol with highly negative contexts (e.g., nausea induced by various medications, such as the drug Ant-abuse) or other negative cues (Goudriaan & Sher, 2012). Other methods include teaching social skills to deal with stressors and to facilitate problem solving or developing skills aimed at reducing or controlling drinking (e.g., refusing or just sipping drinks).

2.8.6 Pharmacotherapy

Pharmacotherapy is also commonly used to assist individuals with alcohol dependence by easing the symptoms of withdrawal and easing craving. Disulfiram (Ant-abuse), naltrexone, and acamprosate are among the most common drugs used for treatment (Schwartz, Mitchell, Gordon, & Kinlock, 2011). The effectiveness of various treatment approaches has been assessed in populations of individuals with drinking problems and those with alcohol dependence. According to study findings, the most successful approaches include brief

intervention and motivational enhancement, followed by pharmacotherapy and skills therapy. Various self and mutual help approaches, despite their popularity, are less effective and, according to some research, no more effective than no treatment (Miller, 2013b).

2.8.7 Self-help or Mutual Help Groups

Self-help or mutual help groups aspire to abstinence from alcohol. They include Alcoholics Anonymous (AA), developed in the United States, in which an individual submits to a higher power in the process of recovery. AA members make a fresh resolve each day not to drink. AA is an international mutual aid movement declaring its "primary purpose is to stay sober and help other alcoholics achieve sobriety. It is a twelve-step programme in which members admit that they are powerless over alcohol and need help from a "higher power"; seek guidance and strength through prayer and meditation from a god (or Higher Power) of their own understanding; take a moral inventory with care to include resentments; list and become ready to remove character defects; list and make amends to those harmed, and then try to help other alcoholics recover. Its goal is to effect enough change in the alcoholic's thinking to bring about recovery from alcoholism through a spiritual awakening (Maisto, et al., 2010).

2.8.8 Social Norms Approach

The social norms approach is based on the view that many college students think campus attitudes are much more permissive toward drinking than they really are and believe other students drink much more than they actually do. The phenomenon of perceived social norms—or the belief that “everyone” is drinking and drinking is acceptable—is one of the strongest correlates of drinking among young adults and the subject of considerable research. By and large, the approach most often used on campuses to change students’ perception of drinking focuses on the use of social norms campaigns. These campaigns attempt to communicate the true rate of student alcohol use on campus, with the assumption that as students’ misperceptions about other students’ alcohol use are corrected, their own levels of alcohol use will decrease (Dowdall, 2012). A review on the impact of social norms interventions on alcohol use among college students indicated reduction of alcohol drinking after 3-6 months follow-up (Miller, 2013a). However, social norms approaches work best when combined with other interventions.

2.8.9 Peer Education/Counselling Approach

Efforts to stem out alcohol from campuses have been made for decades. Peer education has been used extensively in different settings for the reduction of risk-taking behaviour related to drug abuse. The basic premise in using peer group members as peer educators/counsellors revolves on the belief that young people learn about drug use from their peers. Peer education is often used to effect changes in knowledge, attitudes, beliefs, and behaviours at the individual level. In addition, peer education may also create change at the group or societal level by modifying norms and stimulating collective action that contributes to changes in policies and programmes (Meyers & Isralowitz, 2011). Larimer and Cronce, (2007) documented that trained peers are very helpful in identification, referral as well as provision of counselling services to their colleagues. Peer education and counselling programmes have been embraced in Kenyan universities.

2.8.10 Anti-drug Campaigns and Public Lecturers Approach

Some campuses sponsor alcohol awareness events and classroom lectures to disseminate information about alcohol use. Such education programmes raise students' awareness of issues surrounding alcohol use. However, these programmes appear to have minimal effect on drinking and on the rates of alcohol problems (Miller, 2013b). Studies which have aimed at examining the impact of public education campaigns have generally reported no impacts on the levels of alcohol consumption. Such campaigns have modest effects on improving knowledge about alcohol but have not been demonstrated to lead to a change in behaviour (Slaymaker, Brower & Crawford, 2008). Anti-drug campaigns have widely been used in Kenyan universities in an effort to fight alcohol and other drugs abuse.

While there is a lot of literature available on the various interventions in response to alcohol use among university students in other parts of the world (Dowdall, 2012; Larimer & Cronce, 2007; Maisto et al., 2010; Meyers & Isralowitz, 2011; Coon & Mitterer, 2012; Slaymaker, Brower & Crawford, 2008) little evidence is available on the counselling interventions put in place in the Kenyan universities in response to alcohol use. This study therefore sought to fill this gap.

2.9 Theoretical Framework

Alcohol use among university students can be explained by the Social Learning Theory and Outcome Expectancy Theory.

2.7.1 Social Learning Theory (SLT)

Social learning theory by Albert Bandura (1977) approaches the explanation of behaviour in terms of continuous reciprocal interaction between cognitive, behavioural and environmental determinants. Within the process of reciprocal determinism lies the opportunity for people to influence their destiny as well as the limits of self-direction. This conception of human functioning then neither casts people into the role of powerless objects controlled by environmental forces nor free agents who can become what they choose. Both the people, and their environments are reciprocal determinants of each other (Jarvis, Holford, & Griffin, 2003). Thus, according to SLT, human functioning involves interrelated control systems in which behaviour is determined by external stimulus events, by internal processing systems and regulatory codes and by reinforcing response-feedback systems (Leonard & Blane, 1999). The social aspect of the theory stems from the assumption that behaviour is learned through direct observation of others' behaviours, but also through the imitation or modelling of others' behaviours. Thus, learning could take place simply by observing the actions of another, and that this learning occurs even if there is no observable response. Bandura also noted that people could learn by observing the consequences that occurred to others, whether they were rewarded or punished for a certain response; a process often called vicarious learning (Koritzky, Luria & Yechiam, 2011; Bandura, 1977).

One principle of SLT embodies the developmental notion that learning to drink occurs as part of growing up in a particular culture in which the social influences of family and peers shape the behaviour, beliefs and expectancies of young people concerning alcohol through modelling (Mastroleo & Monti, 2013). Social groups are so significant, even among university students, because they affect the individual's main sources of reinforcement and punishment, expose the individual to behavioural models and help form conceptualizations of normative behaviour in regard to alcohol use and other behaviours (Koritzky et al., 2011). Youthful drinking is influenced by the modelling of alcohol consumption; the creation of specific expectations of

drinking via media portrayals of sexual prowess, power and success; and social reinforcement from peer groups (Mastroleo & Monti, 2013).

Social reinforcement is another central principle in SLT. That is, use and abuse of psychoactive substances such as alcohol can be explained by differential exposure to groups in which use is reinforced. These groups provide the social environments in which exposure to definitions, imitations of models, and social reinforcements for use of or abstinence from substances like alcohol take place. Reward and punishment structures are built into specific groups. By interacting with members of certain groups or social circles, people learn definitions of behaviours as good or bad ((Mastroleo & Monti, 2013; Borsari & Carey, 2006). Negative reinforcement may also be a potent factor in developing or maintaining drinking problems through reduction of tension, or negative moods, relief from pain or release from social inhibitions (Mastroleo & Monti, 2013). Continued alcohol use among university students for instance, may lead to abuse as well as other adverse effects such as poor academic performance, poor interpersonal relationships, among others. These effects may lower the esteem of the alcohol user, who may in turn abuse alcohol as a coping mechanism. Tension from academics and lack of social inhibitions such as parents and guardians may predispose university students to alcohol use. The different environments in which college drinking occurs provide varying degrees of acceptance of certain behaviours. This may create an association of such parties with drinking in the mind of the university students, hence influencing them to use alcohol during such events (Borsari & Carey, 2006).

As earlier stated, humans acquire new behaviours through the observation of others, or through verbal or written communication (Borsari, 2006). Thus, well implemented counselling interventions can help alcohol users and abusers to learn new behaviours. Because of the significant role played by the social groups in learning, some counselling interventions are carried out in groups. Such interventions include: peer counselling activities, group therapy, and family therapy and support groups. Other psychosocial interventions encourage alcohol users to identify and develop fulfilling alternatives to substance misuse, as exemplified by the community reinforcement approach (CRA), which stresses the development of alternative

reinforcers (e.g. fulfilling social activities with non-alcohol users) and vocational rehabilitation (Petry & Barry, 2010).

2.7.2 Outcome Expectancy Theory

Outcome Expectancy Theory is a component of Social Cognitive Theory by Albert Bandura (Heideman, 2008). Social Cognitive Theory provides an explanation for human behaviour as an interaction of a person's thoughts, behaviour and their environment. An individual's learning is also influenced by the environment, behaviour and cognition-person's thoughts (Bandura, 1986). Outcome expectancy theory predicts that the higher the perceived outcome expectancy and the more valued the outcome, the greater the motivation to perform the activity. In regard to alcohol use, this cognitive theory maintains that individuals learn and develop beliefs about the anticipated outcomes of drinking through their experiences with parents, peers and the media which later come to influence their drinking behaviour (Heideman, 2008).

Alcohol expectancies are regarded as structures in long-term memory that impact cognitive processes governing current and future alcohol consumption. Specifically, drinking behaviour is positively associated with positive expectancies and inversely associated with negative expectancies. Positive alcohol expectancies are beliefs that alcohol consumption will lead to increased relaxation/tension reduction, sexual enhancement, and physical/social pleasure. Negative expectancies are beliefs that alcohol use will result in the unpleasant consequences, such as feeling sick or having a hangover (Mastroleo & Monti, 2013; Reimers & Fernandez, 2011). Although negative expectancies have been shown to predict alcohol consumption, research has reported that positive expectancies account for more variance in future alcohol consumption in the general population. Positive consequences are thought to influence behaviour more strongly than delayed negative effects. Furthermore, positive expectancies are more readily accessible from memory than negative expectancies (Heideman, 2008). However, those who hold negative expectations about alcohol are likely to abstain from it. The alcohol use patterns will therefore vary based on the expectations these students and their social groups hold towards alcohol. Continued use of alcohol in pursuit of positive outcomes will result in adverse consequences such as health complications, poor relationships with family and peers, poor financial management, lagging behind in academic work among others. Counselling

interventions are therefore tailored to help the alcohol users get better ways of experiencing positive outcomes without necessarily abusing alcohol.

2.10 Conceptual Framework

According to Bandura, the cultural and subcultural norms define whether alcohol use will be encouraged at all and if so, in what quantities and under what conditions. These group norms are learned by observation of socializing agents such as the drinking behaviour of adults and the presentation of alcohol use in the media (Leonard & Blane, 1999). Learning to drink therefore occurs as part of growing up in a particular culture as one interacts with family, peers, and the society. This study conceptualized that alcohol use (Independent Variable) among university students varies in patterns and prevalence and it is shaped in the social context. That is, social influences shape the behaviour, beliefs and expectancies of a young person concerning alcohol use (Mastroleo & Monti, 2013). It is within these contexts that young people get introduced to alcohol. Social groups provide definitions, imitations of models and social reinforcement for use or abstinence from alcohol. Where alcohol use behaviour is reinforced, it leads to continued use such that an individual becomes not just a lifetime user but a current alcohol user. These social groups not only provide a sense of belonging among university students but also define and reinforce various patterns of alcohol use, which are the indicators of the independent variable. These patterns include: the levels of alcohol use, occasions or circumstances leading to use, and events ideal for alcohol use. It is within these groups, that heavy drinking may be accepted and encouraged during various events such as campus party and in birthday parties.

In addition, university students who have expectations that alcohol would result in more approval from the group; is a good means of relaxation; would reduce social anxiety and stress during examination period and class presentations; and would boost their confidence are likely to use alcohol. Continued use will result in adverse effects conceptualized as Dependent Variables in figure 2 that includes poor academic performance, health issues, financial problems, emotional instability, problems in handling relationships as well as legal and criminal concerns. However, the role of alcohol use among the students will be influenced by a number of intervening variables including, counselling interventions implemented in

universities in response to alcohol use, religious affiliations and family background of the individual students, and type of university.

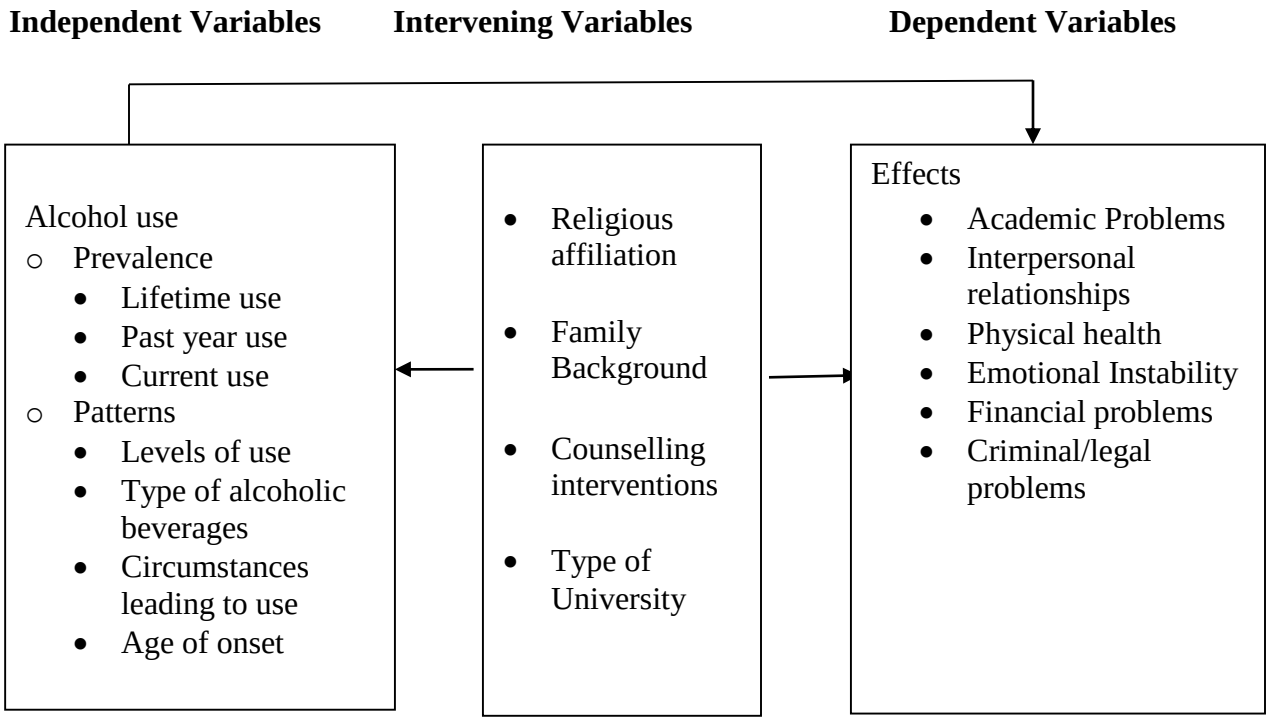


Figure 2. Relationships prevalence, patterns, effects and counselling interventions of alcohol use

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology that was used in the entire research activity. It focuses on the research design, the location of the study, target population, sampling procedures and the sample size, instrumentation, validity and reliability of research instruments, data collection procedures and data analysis.

3.2 Research Design

The study was *ex post facto* in approach and adopted the causal comparative research design. *Ex post facto* research is a type of research that takes place long after the facts have occurred (McKenzie & Cottrell, 2010). It is a type of research design where the effects of the independent variable or variables have already occurred and in which the researcher begins with observation of dependent variable or variables and then studies the independent variables in retrospect for their possible relationship with the dependent variables (Cohen, Manion & Morrison, 2011). According to Salkind (2010), causal comparative research design is a research design that seeks to find relationships between independent variables and dependent variables after an event has already occurred. The researcher's goal is to establish whether independent variable affected the outcome of dependent variable by comparing two or more groups. Investigators attempt to determine the cause or consequences of differences that already exist between or among groups of individuals without manipulation. Thus, since this study sought to establish prevalence, patterns, effects and counselling interventions of alcohol among students in both private faith based and public universities; variables that have already occurred among students in two types of universities, then, causal comparative was the most appropriate.

3.3 Location of the Study

The study was carried out in two private faith based universities (University A and University B) and two public universities (University C and University D) (Names withheld because of the sensitivity of the subject area of the study). These universities are located in four different counties in Kenya. These counties have a number of universities as well as satellite campuses

of many universities. Hence, they were viable locations for this research because of the accessibility of the target population, that is, the university students. These students consume alcohol, hence the need to establish the patterns, prevalence and effects of alcohol use, as well as the counselling interventions towards the same.

3.4 Population of the Study

The target population consisted of 31,869 regular students from four universities, that is, 4,068 from University A (Admissions Department University A, 2011); 3,055 from B (Admissions Department University B, 2011); 15,984 from C (Admissions Department University C, 2011); and 8,762 from D (Admissions Department University D, 2011). The accessible population comprised of 19,177 regular students from all the main campuses of the four universities, as shown in Table 1. The main campuses of the four universities have residential facilities for the students, hence the ease in accessing the subjects. The regular students were involved in this research due to the fact that majority are direct from high school and are experiencing a transition from adolescence to young adulthood.

Table 1

Number of Regular Students in the Sampled Universities

Type of University	University	Target Population	Accessible Population
Private Faith Based	A	4,068	1,731
	B	3,055	985
Public	C	15,984	10,044
	D	8,762	6,417
	Total	31,869	19,177

In addition, since they do not have any responsibility apart from self, this may predispose them to alcohol use. In addition, 4 Deans of Students, 4 Students Counsellors and 4 Games Tutors from the four main campuses were included in the study. The Deans of Students and Students Counsellors are charged with the responsibility of offering psychosocial support as well as guidance and counselling services to the students. They are thus well placed to offer the required alcohol use information about the regular students. The Games Tutors too are well

versed with information on how students behave with respect to alcohol use during games competitions and especially while not within the university.

3.5 Sampling Procedures and Sample Size

Purposive sampling was used to select two private faith based universities and two public universities. These included University A and University C from urban setting; and university B and University D in the rural areas. The two public universities have also been in existence for over 20 years and the two private faith based universities have had their charter for over 5 years, hence, the likelihood of diverse representation of regular students from different parts of the country. According to Krejcie and Morgan (1970), table of determining the sample size, for a population of 19,177 from all the four universities, the sample size is 377. Three subjects were added to take care of attrition, resulting to a sample size of 380. Due to the small size of accessible population in private faith based universities, which translated to very few subjects in this stratum when stratified random sampling was used, 100 subjects were purposively drawn from the two private faith based universities and 280 from the public universities, translating to a sample size of 380 students as indicated in Table 2. This ensured reasonable representation of private universities for logical results. Stratified random sampling is a process in which certain subgroups or strata are selected for the sample in the same proportion as exist in the population (Cohen et al., 2011; Fraenkel, Wallen, & Hyun, 2011).

Table 2

Number of Students Included in the Sample

Type of University	University	Accessible Population	Sample Size (S)
Private Faith Based	A	1,731	50
	B	985	50
Public	C	10,044	140
	D	6,417	140
	Total	19,177	380

The subjects were accessed in the common course classes. The researcher identified the common courses, with the help of Student Counsellors, and requested for permission to administer the questionnaires from the lecturers concerned.

3.6 Instrumentation

A questionnaire, an interview schedule and Focused Group Discussion guide were used in data collection. The questionnaires were used to collect data from the students. This questionnaire contained items focusing on student demographic details (age, gender and living arrangements) student drinking component: general drinking patterns and alcohol-related behaviours. Items addressed were where, when, how often and with whom alcohol was consumed. In addition, items on the effects of alcohol use for respondents who had used alcohol in the past year were included. The 10-item Alcohol Use Disorder Identification Test (AUDIT) and CAGE scales were also included. The AUDIT scale provides an assessment of levels, patterns and problems associated with alcohol consumption. The total score (range = 0-40) is the sum of scores on individual questions (ranges = 0-4). Higher scores indicate greater likelihood of hazardous and harmful drinking as well as dependence. Scores from 8 to 15 represent moderate alcohol problems (hazardous drinking), 16 to 19 represent harmful drinking and scores of 20 or more represent severe problems and a cause for more thorough evaluation of the presence of alcohol dependence (Baer & Blais, 2009) .

The AUDIT was developed by WHO as a simple method of screening for excessive drinking and to assist in brief assessment. It provides a framework for intervention to help risky drinkers reduce or cease alcohol consumption and thereby avoid the harmful consequences of their drinking. The AUDIT also helps to identify various levels of alcohol use and some specific consequences of harmful drinking. The AUDIT was developed and evaluated over a period of two decades, and it has been found to provide an accurate measure of risk across gender, age, and cultures (Babor, Biddle, Saunders & Monterio, 2001). Its reliability and validity have been established in research conducted in a variety of settings and in many different nations (Daeppen, Yersin, Landry, Pecoud & Decrey, 200l; Gache, Michaud, Landry, Accietto, Arfaoui, Wenger & Daeppen, 2005). The AUDIT was found to have very high internal consistency; Cronbach's coefficient (α) ranging from = 0.75 to 0.9 (Gache et al., 2005).

CAGE scale was also used to assess problem drinking for the current users. The CAGE was developed in the 1970s as a short interviewer-administered test to screen for alcoholism or covert drinking problems. CAGE is an acronym referring to four questions pertaining to the

lifetime drinking experience of the drinker (Bisson, Nadeau & Demers, 1999). Its concise and inexpensive format, its simplicity of scoring and the non-incriminating nature of the questions make it advantageous over other screening tools. Its criterion validity has been assessed mainly in studies using clinical samples of patients treated for disorders other than alcoholism (Benuto, 2012; Dhalla & Kopec, 2007).

An interview schedule was used to collect qualitative data from the personnel working in the Department of Student Welfare/Affairs. The interview schedule contained items on the extent of alcohol use, effects and counselling interventions the universities employ in dealing with the problem. Focused Group Discussions were done with 12 peer counsellors/educators in each university, to gather qualitative data on the extent of alcohol use, the patterns of alcohol use and the counselling interventions put in place by the university to control alcohol use.

3.6.1 Validity of Research Instrument

This is the degree to which an instrument measures the variable it is intended to measure (Kothari & Garg, 2014). To ensure content validity of the questionnaire and the interview schedule, the following was done: First, the items in the three instruments were scrutinized by the researcher, by comparing them with the set objectives. Secondly, the research sought the expertise of the supervisors and other experts in the Department of Psychology, Counselling and Educational Foundations for the purposes of scrutinizing relevance of the items in the instruments. The researcher used the results of the pilot test to adjust the questionnaire items and make them appropriate and understandable, thereby increasing their validity.

3.6.2 Reliability of Research Instrument

According to Cohen et al. (2011), reliability is a measure of consistency among items. It is the degree of consistency with which a research instrument measures whatever it is intended to measure. Piloting was done at Meru University of Science and Technology (MUST) and Nazarene University; Meru Campuses. The questionnaire was piloted with 15 students from MUST and 15 students from Nazarene University (Meru Campus). The staff interview schedule was also piloted with one student counsellor, one Games tutor and the Dean of Students from MUST. An FGD comprising of 12 students from Peer Counselling club was conducted at MUST. Thereafter, data was entered in the SPSS version 21.0 for windows from

which Cronbach's Coefficient Alpha was computed. The reliability coefficient of the questionnaire was found to be 0.81 and therefore the instrument was considered reliable. The AUDIT scale has been evaluated for over two decades and its reliability established through research conducted in a variety of settings (Daeppen, Yersin, Landry, Pecoud & Decrey, 200l; Gache, Michaud, Landry, Accietto, Arfaoui, Wenger & Daeppen, 2005). The AUDIT was found to have very high internal consistency; Cronbach's coefficient (α) ranging from = 0.75 to 0.9 (Gache et al., 2005). CAGE scale has demonstrated high reliability in diverse populations ranging from α= 0.73 to 0.95 (Benuto, 2012; Dhalla & Kopec, 2007). A research instrument is assumed to reflect internal validity if $\alpha \geq 0.7$ (Veer & Higler, 2013) and is considered acceptable especially when dealing with a large number of items (Johnson & Christensen, 2010) like in the research instrument used in this research.

3.7 Data Collection Procedure

After meeting the requirement of the Graduate School, the researcher obtained a permit from the National Commission of Science, Technology and Innovations (NACOSTI). Thereafter, she informed the County Commissioners and County Directors of Education in the respective counties where these universities are located about the intent to conduct the study (This was a requirement by NACOSTI). Later, the researcher sought permission from the administration of the respective universities as well. On receiving the consent from the administration of respective universities, she made appointments with the Deans of Students of the four universities to inform them about the study and the scheduled dates for data collection. During the scheduled dates for each university, the researcher first conducted interviews with the Dean of Students, the Student Counsellor and Games Tutor. Thereafter, through the assistance of the Student Counsellors, she identified the participants for FGDs and assembled them in one room. The researcher moderated the discussions, while research assistants assisted in recording the proceedings. The researcher had enlisted one researcher assistant in every university to assist in recording the FGDs proceedings. The research assistants were students and leaders in the peer counselling clubs of their respective universities. Prior to the scheduled time for FGDs, the researcher trained each research assistant on how to record proceedings of FGDs; including the non-verbal communications.

Through the offices of the Deans of Students in the respective universities, the researcher was able to identify the common classes where lecturers concerned were requested to give 15 minutes of their lecture. Once in the common classes, the respondents were briefed on the purpose of the study and were requested to participate. Respondents were also assured that their participation was voluntary and confidential with regard to their responses. They were guaranteed anonymity, as no identifying details were asked. It was also communicated to them that they could omit any questions that they did not want to answer. To also ensure gender representativeness, the researcher was keen to distribute questionnaires to both male and female students.

3.8 Data Analysis Procedures

Both qualitative and quantitative data was collected. Data from the questionnaires was processed, edited, coded and entered in SPSS version 21.0 for Windows to be analyzed. Chi-square was performed to determine any significant relationship between prevalence and patterns of alcohol use among with type of university. Descriptive statistics such as frequencies, percentages, and tables were used to present data.

Percentages and frequency tables were used to determine the prevalence and patterns of alcohol use among students in private faith based and public universities in Kenya, in objective one and objective three. To establish the relationship between prevalence and patterns of alcohol use between students in private faith based and public universities in Kenya, percentages, frequency tables and chi-square were used. Chi-square test is appropriate in determining significant relationship between two variables with two or more categories (Walker & Maddan, 2013). For discrete data, chi-square is a simple and a common method to determine whether differences in proportions between study groups are statistically significant (Atluri, 2005). Percentages and frequency tables, were used to determine the effects of alcohol use among the respondents in objective five. In addition, to establish the counselling interventions by put in place in response to alcohol use in both private faith based and public universities in Kenya in objective six, percentages and frequency tables were used.

To facilitate the efficient analysis of qualitative data from FGDs and interviews, summaries were done shortly after the discussions. The researcher also went through the notes and summaries written by research assistants, identifying themes related to the research questions. Following the research questions as guides, the researcher extracted selected comments, and used selected material to generate short case studies to illustrate findings generated using the questionnaire. These findings were presented as excerpts.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the results, interpretation of data and discussions of the findings. The data was analysed using SPSS version 21.0 for windows. Both inferential and descriptive statistics were used. The data was meant to answer six research questions. The results were presented and discussed according to each research question. Chi-square was used determine the relationship between prevalence and patterns of alcohol use among university students and type of university at a significance level of $\alpha=0.05$. For any $p\geq0.05$, the relationship between variables was considered statistically significant. Qualitative data from interviews and FGDs were categorized into themes as they related to the research questions.

4.2 Response Rate

A total of 380 questionnaires were administered to fulltime undergraduate students in the four universities, out of which 374 were duly filled totalling to 98% response rate, six questionnaires were however discarded because of incompleteness. Interviews were conducted among the sampled 12 personnel from Departments/Directorates of Student Welfare from the four universities. The personnel sample consisted of a Dean of student, a Student Counsellor and a Games Tutor from each university. FGDs were also conducted in all the four universities and they mainly involved members of peer counselling clubs.

4.3 Demographic Characteristics of the Respondents

The sample constituted of 374 students, 12 members of staff from the Departments/Directorates of Student Welfare/Affairs and 48 FGDs participants. Table 3 shows the summary of the demographic characteristics of the students' sample drawn from both private faith based (private FB) and public universities.

Table 3

Demographic Characteristics of the Respondents

Variable	Frequency	Percentage (%)
Type of University		
Public	274	73.3
Private faith based (FB)	100	26.7
Gender		
Male	186	49.7
Female	188	50.3
Place of Residence		
In the university hostels	168	44.9
Off campus with my parents	35	9.4
Off campus but not with my parents	163	43.6
Other	8	2.1
Year of Study		
First year	78	20.9
Second year	108	28.9
Third Year	75	20.1
Fourth year and above	113	30.2

The table shows that 26.7% of the respondents were drawn from private faith based (FB) universities while 73.3 % were drawn from public universities. A total of seventy eight students (20.9%) were first years, 108 (28.9%) were second years, 75 (20.1%) third years and 113(30.2%) were fourth years and above. The distribution of respondents by type of university showed reasonable discrepancy. This was assumed so because generally, private universities tend to have smaller proportion of students in comparison to public universities ("Student numbers soar by 35%, university funding lags - University World News," n.d.). The table also shows that majority (30.2%) of the respondents were in their fourth year of study, followed by second years at 28.9% and first years at 20.9%. Third years came last at 20.1%. This varied representation by years of study could have been as a result of varied enrolment for common courses among respondents from all the years of study. That is, the students from all years took up the common courses at their convenience. Majority (44.9%) lived in the university hostels while 43.6% lived outside the universities but not with their parents. Only 9.4% lived with their parents. This preference for hostels could be due to the fact that the sample was drawn from the main campuses of the four universities which do have accommodation facilities for the students.

4.4 Prevalence of Alcohol Use among Students in Private Faith Based and Public Universities in Kenya

The first objective of the study sought to establish the prevalence of alcohol use among students in both private faith based and public universities in Kenya. This was based on the fact that alcohol use in the general population has been widely studied by NACADA (NACADA, 2007; NACADA 2012) and hence the need to establish the levels at which this is happening at the universities in Kenya. All the respondents (n=374) confirmed that students in their respective universities consume alcohol, and 79.4% felt that this was done on a regular basis. The prevalence of alcohol use was measured by use of three indicators: the frequencies of life-time use, past year use and the current use. Life-time alcohol use in this study referred to ever-use of alcohol in one's lifetime; past year use referred to alcohol use in the past 12 months prior to the study and current use referred to alcohol use in the past 30 days prior to the study. The three indicators are not independent in that a respondent may have had an alcoholic drink in the past month and in the past year, which subsequently means he/she had used alcohol in his/her lifetime.

Table 4

Prevalence of Alcohol Use among Respondents

	Life time use		Past year Use		Current use	
	Frequency(f)	%	Frequency(f)	%	Frequency(f)	%
Yes	196	52.4	146	39.0	114	30.5
No	178	47.6	228	61.0	260	69.5
Total	374	100	374	100.0	374	100.0

Table 4 shows that majority (52.4 %) were life-time users, while 39.0% were past year users and current users were 30.5%. This implies that those who had ever consumed alcohol at least once in their life time were slightly over a half (196, 52.4%) while those who had used an alcoholic drink in the past year prior to the study were 146 (39.0%). On the other hand, 30.5% (114) had used alcohol in the month preceding the study. This implies that, not all the lifetime users used alcohol in the past year prior to the study, hence the decline from 52.4% to 39.0%.

Similarly, alcohol use in the past month was also lower (30.5%) than past year use. This also indicates that alcohol use in the past year did not automatically infer last month use.

The prevalence of lifetime alcohol use at 52.4% as indicated in Table 4 was slightly higher than that of Hamaraya University in Ethiopia which was 50.2% (Tesfaye et al., 2014) but lower than that of Addis Ababa university which was 56.7% (Eshetu & Gedif, 2007). These levels are relatively lower than those of lifetime use and current use in China which were 80.8% and 49.3% respectively (Cheng-Ye, Pei-Jin & Yi, 2012). The prevalence of lifetime, past year and current use among their college counterparts in the USA and Brazil was much higher at 78.0%, 75.6% and 63.1%, (Johnston, O'Malley, Bachman, Schulenberg, & Miech, 2014) and 86.2%, 72.0% and 60.5% respectively (Andrade et al., 2012) . While these levels in the Kenyan universities are relatively lower in comparison with other parts of the world, they are rather high while compared with the general population in Kenya. According to NACADA (2012), the prevalence of current use of alcohol on the general population, among 25-35 year olds and among 18-24 year olds (where most university students belong) was 13.6%, 17.6% and 10.2% respectively which implies that the prevalence of 30.5% found in this study is rather high. This could be attributed to the new found freedom away from parental figures and high level of peer influence among others.

4.4.1 Prevalence of Alcohol Use across Socio-demographic Factors

Prevalence of alcohol use among university students is as a result of interaction with a number of socio-demographic factors. Table 5 shows the prevalence of alcohol use across gender and place of residence.

Table 5:

Prevalence of Alcohol Use across Socio-demographic Factors

Socio-demographic characteristics	Alcohol consumption					
	Lifetime use		Past year use		Past month use	
	Yes f (%)	No f (%)	Yes f (%)	No f (%)	Yes f (%)	No f (%)
Gender						
Male	115(61.8)	71(38.5)	92(49.5)	94(50.5)	64(34.4)	122(65.6)
Female	81(43.1)	107(56.9)	54(28.7)	134(71.3)	50(26.6)	138(73.4)
Academic year						
First	43(55.1)	25(44.9)	30(38.5)	48(61.5)	23(29.5)	55(70.5)
Second	46(42.6)	62(57.4)	36(33.3)	72(66.7)	33(30.6)	75(69.4)
Third	36(48.0)	39(52.0)	19(25.3)	56(74.7)	12(16.0)	63(84.0)
Fourth	71(62.8)	42(37.2)	61(54.0)	52(46.0)	46(40.7)	67(59.3)
Place of residence						
University hostels	77(45.8)	91(54.2)	62(36.9)	106(63.1)	54(32.1)	114(67.9)
Off Campus with parents	24(68.6)	11(31.4)	7(20.0)	28(80.0)	2(5.7)	33 (94.3)
Off campus but not with parents	92(56.4)	71(43.6)	77(47.2)	86(52.8)	58(35.6)	105(64.4)
Other	3(37.5)	5(62.5)	0(0.0)	8(100.0)	0(0.0)	8(100.0)

Table 5 indicates that prevalence of alcohol use was higher among the male students than female students. The table shows that 61.8%, 49.5% and 34.4% of the male students had used alcohol in their lifetime, in the past year and in the past month respectively. On the other hand, 43.1%, 28.7% and 26.6% of the female students were lifetime, past year and current users respectively. This denotes that overall, there were more male students using alcohol than female students. These findings are consistent with the findings by Seguel et al. (2012) who found that alcohol use in one university in Chile was higher among male students than among female students. In addition, more male students tend to be alcohol abusers and dependent on alcohol (Adewuya et al., 2007; Sebena et al., 2011; Abayomi et al., 2013). Sebena et al., for instance observed that 77.0% and 32.3% of the male students in four universities in Slovakia were heavy episodic drinkers and problem drinkers respectively, compared to 30% and 14.3% of female students. Coll, Draves, and Major, (2008) also established that male students drank significantly more often and in greater quantities than did the female students. These findings indicate that male students are more vulnerable to alcohol use than their female counterparts.

Table 5 further shows that 47.2% and 35.6% of the students living off campus but not with the parents had used alcohol in the past year and past month respectively, in comparison to 36.9% and 32.1% of the students living in the university hostels. Further, only 5.7% of the students living with their parents had used alcohol during the past month prior to the study. These findings show that prevalence of alcohol use in the past year and last month was higher among students living off campus but not with their parents than those living in the hostels or with their parents. This suggests that a higher number of students living off campus were current and past year users than those living in the university hostels. Only 5.7% of those living with their parents had used alcohol a month prior to the study. This is relatively lower in comparison to those living in the hostels. This shows that living with parents is more protective of alcohol use than living away from the parents, either in the university hostels or off campus. Studies in other parts of the world have revealed that living in the students hostels is associated with higher consumption of alcohol compared with living with parents (Seguel et al., 2012; Arbour-Nicitopoulos, Kwan, Lowe, Taman, & Faulkner, 2010). Living in student hostels, on campuses or in private homes, either with roommates or alone, entails diminished exposure to parental control and more frequent exposure to peer influences and therefore to opportunities to engage

in such problem behaviours as drinking (Sebena et al, 2011). On the other hand, Bulmer et al. (2010) observed that students living on-campus in a public university in North-eastern region of the United States consistently indicated higher alcohol consumption frequency and volume compared to students living off-campus. These findings are contrary to the findings of this study where alcohol use was more prevalent among students living off campus than those living within the university hostels. However, Valliant and Scanlan, (1996), had earlier found out that the likelihood of being addicted to alcohol was more prevalent among university students living off campus but not with parents. Özgür İlhan et al., (2008) also later found out that a significantly smaller number of students living in university hostels consumed alcohol in comparison to students living outside campus.

In addition, Table 5 points out that alcohol use was more prevalent among the fourth years in comparison to other years of study. For instance, 40.7% of the fourth years sampled had used alcohol a month prior to the study, followed by second years at 30.6%, and first years at 29.5%. Only 16.0% of the third years sampled had used alcohol a month prior to the study. These results imply that respondents in all the years of study were using alcohol, however, students in the fourth year of study had the highest number (40.7%) of current users, followed by the second years at 30.6%. These findings are consistent with Özgür İlhan et al., (2008), who found out that among the sampled students who had use alcohol a year prior to the study in five universities in Turkey, majority of those who were using alcohol once a month or more frequently were fourth years (68.3%). However, Sebena et al. (2011), and Young and Klerk, (2008) found out that a higher study year was associated with lower levels of alcohol use.

The views of the personnel working in Directorates/Departments of student welfare regarding prevalence of alcohol use among university students was that alcohol use is highly prevalent and is a source of concern to the university management as revealed from the excerpts 1.

Excerpt 1

Dean of Student from Public University C: Alcohol use is a grave issue in our university because in the recent past we have lost students and lecturers through death due alcohol related issues. We have been called on a number of occasions to pick students from the hostels or from the neighbourhood who are completely intoxicated and some even in a coma.

Dean of Students from Private faith based University A: Alcohol use among our students is quite significant to create concern. As a Dean of Students (DOS), I have caught so many students drank. In addition, when I take a walk around our immediate neighbourhood, I find a significant number of students in the pubs and joints drinking alcohol even during the day.

FGDs also revealed varied perceptions in regard to prevalence of alcohol use among the students.

Excerpt 2

Joy from Private faith based University A: Alcohol use among our colleagues is very prevalent, in as much as this is a Christian university. We are surrounded by so many pubs and alcohol joints and you will tend to find our students frequenting these joints. I think only a few students who do not drink alcohol in this university.

Chris from Private faith based University B: I know that 75% of the students in this university drink, but it is worse in the school of medicine; the levels are much higher than 80%. This is attributable to their flashy lifestyles because majority come from very rich families. Hence they have enough pocket money to finance their drinks comfortably.

John from Public University C: The prevalence of alcohol use in this university is very high; we are surrounded by pubs and alcohol joints everywhere. Our Student Centre within the university also sells alcohol. So alcohol here is readily available. You will not be surprised to find several drank students lying on trenches early in the morning.

Kennedy from Public university D: I think approximately 50% of students take alcohol based on the number of drank student we meet on a daily basis. Others are always drinking at the slum in the neighbourhood.

These views from FGDs reflect that peer counsellors/educators generally perceived a higher prevalence of alcohol use among their fellow peers than the actual figures. This is consistent with research findings from Core Institute Survey on Alcohol and Drugs, a nationwide study

in the USA that found that at every one of the 100 colleges and universities in the study, most students perceived much more frequent and higher use of alcohol among their peers than actually occurred at their school (Perkins, 2002). Another nationwide study by Perkins, Haines, and Rice, (2005) also documented that regardless of the actual campus drinking norm, a consistently large percentage of students nationwide overestimated the quantity of alcohol consumed by their peers. This misconception should be addressed because it is seen as a great predictor of alcohol use among the college students (Perkins et al., 2005). A different study done in Paris, by França, Dautzenberg, and Reynaud, (2010) also found that second year students in the region overestimated both the prevalence and levels of drinking among their peers in the university.

4.5 Relationship between Prevalence of Alcohol Use and Type of University

The second objective of this study sought to establish the relationship between prevalence of alcohol use among students and type of university, Prevalence of alcohol use among the students was measured using the following indicators: life-time, past year and current alcohol use. This objective was based on the fact that settings and policies operating in private faith based universities are different from those in public universities. In addition, student numbers vary significantly meaning follow-ups in private faith based universities could be simpler than in public universities.

According to Schuman, (2010), faith based universities promulgate standards for student behaviour, such that behaviours such as possession and use of alcohol within the university is highly prohibited. Such differences can give rise to differences in the level of alcohol use among the students. The Chi-square test was used to establish prevalence of alcohol use among students was related to the type of university. Type of university in this case referred to selected private faith-based and public universities in Kenya. Table 6 shows these relationships.

Table 6

Relationship between Prevalence of Alcohol Use and Type of University

			Type of University					
			Private FB	Public	Total	χ^2	*df*	*p*
Lifetime alcohol use	No	Count	40	138	178			
		% within Type of University	40.0%	50.4%	47.6%			
	Yes	Count	60	136	196			
		% within Type of University	60.0%	49.6%	52.4%			
						3.156	1	0.076
Past year alcohol use	No	Count	56	172	228			
		% within Type of University	56.0%	62.8%	61.0%			
	Yes	Count	44	102	146			
		% within Type of University	44.0%	37.2%	39.0%			
						1.413	1	0.235
Current alcohol use (past 30 days)	No	Count	57	203	260			
		% within Type of University	57.0%	74.1%	69.5%			
	Yes	Count	43	71	114			
		% within Type of University	43.0%	25.9%	30.5%			
						11.087	1	0.001

χ^2 is the chi-square value while *p* is the p-value

When the Chi-square was calculated (χ^2=3.156 df=1 *p*=0.076), no significant relationship was found between prevalence of lifetime alcohol use among the students and the type of university. These results therefore indicated that ever use of alcohol in one's life-time was not associated with the type of university one attended. The table further shows that use of alcohol in the past year prior to the study (*p*=0.235)was also not statistically associated with the type of university one attended. This implies that no difference was found between students in private faith based universities and those in public universities on prevalence of ever use of alcohol in one's lifetime and in the year prior to this study. Hence, ever use or past year use of alcohol among the respondents was not influenced by variations in the learning environment.

However, Table 6 indicates a significant relationship in prevalence of current use alcohol (alcohol use in the past month) between students in private faith-based universities and those in public universities (χ^2=11.087 df=1 p=0.001). That is, use of alcohol in the past month was associated with the type of university one attended. For instance, table 6 shows that 43.0% of the respondents from private faith based universities had taken alcohol in the previous month prior to the study, and only 25.9% of the students from public universities had taken an alcoholic drink a month before this study. While limited literature is available on the relationship of prevalence of alcohol use between students in private faith based and public universities, Helm et al. (2002) observed that students in conservative religious sub-cultural settings, tend to exhibit less substance use overall compared to students in other university settings. Additionally, data from a religious affiliated university in the USA revealed that self-reported rates of past year and current use were 28.8% and 18.1% respectively (Felt, McBride & Helm, 2008).

This deviation may be attributed to the passage of time between the two studies. This may also mean that such settings are no longer restrictive enough to override other factors influencing alcohol use among students in these private faith-based universities. In addition, this difference could also be attributed to the fact that due to competitive market trends in regard to admission of students, private faith-based universities admit all students irrespective of one's background, religion or history with substance use. There is therefore the possibility of admitting students who are already using alcohol.

4.6 Patterns of Alcohol Use among Students in Private Faith Based and Public Universities in Kenya

The third objective of the study was to establish the patterns of alcohol use among students in both private faith based and public universities in Kenya. Patterns of alcohol use among the respondents were measured using the following indicators: Age of onset of alcohol use, levels of use according to AUDIT scale, levels of use according to CAGE scale, the days of the week when respondents mostly used alcohol, type of alcoholic beverage mostly consumed and circumstances leading to alcohol use.

4.6.1 Age of Onset of alcohol Use

Respondents who had consumed alcohol at least once in their lifetime were asked to indicate the age at which they began to use alcohol as shown in Table 7.

Table 7

Age of Onset of Alcohol Use among Respondents

Age of first use	Frequency (f)	%
14 years and below	20	10.5
15-17 years	40	20.9
18-21 years	102	53.4
22 years and above	29	15.2
n=191		

Table 7 shows that among the participants who had ever consumed alcohol in their life time, majority (53.4%) took their first alcoholic drink between 18 and 21 years, followed by 15-17 years at 20.9% and 14 years and below at 10.5%. Only 15.2% used alcohol for the first time at the age of 22 years and above. These results show that a good proportion (31.4 %) of lifetime users used alcohol for the first time below the age of 18 years, while over a half used alcohol for the first time between 18 -21 years. Thus initiation to alcohol use occurred towards the end of high school period and while in college. This early onset could be attributed to initiation to alcohol use at primary and high school levels. NACADA, (2010) in line with these findings documented that 462 (74.5%) of the high school students involved in the study took their first alcoholic drink by the age of 15, and only 100 (16.1%) were initiated to alcohol use by age 17.

These findings are consistent with findings by Tesfaye et al. (2014) who found out that majority of the students who reported alcohol use in the university started to drink before joining university and minority after joining university. Liang et al. (2012) also documented that most of the youth alcohol users began using alcohol way before joining college or university. O'Grady et al., (2008) confirming these findings had earlier pointed out that early onset of alcohol use was associated with development of alcohol use disorders and involvement in other illicit drugs. Based on these observations therefore, any intervention to prevent and control alcohol use should not only target universities but high schools and primary schools as well.

4.6.1.1 Persons that Influenced Initiation to Alcohol Use

As earlier observed in Table 7, majority of university students who had used alcohol began to do so way before joining university. This is mostly during their mid-adolescent years. Preedy and Watson, (2004) documented that preference for alcohol use among adolescents and youths is determined by direct reinforcement from family members and peers. Further analysis was done to establish the persons who introduced the respondents to alcohol use. Table 8 shows the results.

Table 8

Persons Who Introduced Respondents to Alcohol Use

Introduced to alcohol by	Frequency(f)	%
Family Member	35	20.2
Friends at home	43	24.9
Friends at school	58	33.5
Friends at college	28	16.2
Friends at school and at home	8	4.6
Self	1	0.6
n=173		

As shown in Table 8, majority (33.5 %) of the respondents who had consumed alcohol at least once in their life time were introduced to drinking by friends at primary or secondary level of education. This implies that alcohol use behaviour is learnt way before joining university. Forty three (24.9%) were introduced by friends at home and 35 (20.2%) were initiated to alcohol use by family members, and only 16.2% were introduced to drinking by friends at the university. Only 0.6% got into alcohol use through personal initiative. In total, 137 (79.2%) respondents were introduced to alcohol by friends either at home or in learning institutions. These findings clearly shows learning to use alcohol occurs in social context, since 99.4% were introduced to alcohol by friends and family and only 0.6% learnt to use alcohol on their own. The findings show that peer influence played a big role in the initiation to alcohol use, and especially during the adolescence years. Galanter, (2006) documents that peer influence is a major factor in the onset and maintenance of alcohol use as well as use of other drugs. He further noted that higher rates of alcohol use were found among adolescents whose friends used alcohol compared to those whose friends did not. Similarly, Kinard and Webster, (2010) documented that peers act

as an influential model by introducing, providing and pressuring alcohol use to other peers. By modelling alcohol use to their peers, university students are viewing alcohol use as a positive and socially acceptable behaviour.

Family influence accounted for 20.2% (35) which is indeed a significant factor in initiation of alcohol use. NACADA, (2010) made a similar observation where friends and family had a significant place in terms of initiation of alcohol use according to 39% and 23% of the respondents respectively. However, a study done by Hernandez et al., (2013), among university students in Australia revealed that all the respondents were introduced to alcohol at home. This is a deviation from the findings of this study where peers were the major influence for the majority of the students. Olaore and Aham-Chiabotu, (2012) also observed that alcohol was one of the drugs of choice for majority of the university students with family members who used alcohol, meaning that the family played a big role in modelling alcohol use behaviour. Van Der Vorst, Engels, Meeus, and Dekovic, (2006) in agreement with these findings, documented that parents who reported alcohol use in their study had fewer rules concerning their children's alcohol use. That is, the more parents drank the more permissive they were and less credible they felt in providing rules pertaining to alcohol use.

Houghton and Roche, (2013) noted that drinking among the youth is either a family activity or a peer activity. Parents, siblings and other relatives are very strong models in initiation of alcohol use especially when a child becomes aware of the family members' drinking. According to Jones and Magee, (2014) and NIAAA (2009) having friends, or siblings who drink is associated with early onset of alcohol use by the adolescents. Then as the child transits from childhood to adolescence, the peer group strongly influences the behaviour (Jones & Magee, 2014). Nargiso, Friend, and Florin (2013) further observed three strong predictors of alcohol use among peers including: alcohol use by close friends, friends' approval of alcohol use, and normative beliefs regarding alcohol use among peers. This is because peers who drink encourage experimentation with alcohol use as well as reinforce the behaviour (NIAAA, 2009).

4.6.3 Levels of Alcohol Use According to AUDIT Scale

To measure the patterns of alcohol use among the respondents, AUDIT scale was used. The AUDIT scale assesses the frequency and intensity of alcohol use, symptoms that are characteristic of dependence and tolerance, and consequences of alcohol use. This scale has been shown to be superior to other measures of alcohol use for alcohol problem screening. In addition, it can classify individuals into low risk, hazardous, harmful or dependent drinkers. The AUDIT has demonstrated good reliability and validity (Shorey, Brasfield, Zapor, Febres & Stuart, 2015).

Consistent with the analysis of AUDIT, scores were computed into four ordinal categories of alcohol use patterns: low risk (0 - 7); hazardous (8 - 15); harmful (16 - 19) and high risk/Dependent (20 and over). Low risk drinking refers to a pattern of alcohol use that exposes the user to minimal risks associated to alcohol use or abstinence from alcohol. Hazardous drinking is a pattern of alcohol use that increases the risk of harmful consequences for the drinker without having yet caused any alcohol-related harm. Harmful drinking is a pattern of drinking that is already causing physical or mental health damage to the drinker while dependent drinking is a pattern of drinking characterised by moderate or severe dependence on alcohol (Baer & Blais, 2009; Young & Klerk, 2008). All these levels require various counselling interventions, including advice to reduce hazardous drinking, brief counselling and further monitoring, while any score above 20 which is an indication of definite harm requires thorough evaluation for the presence of alcohol dependence (Baer & Blais, 2009).

Table 9

Levels of Alcohol Use According to AUDIT Scale

Level of use	Frequency (f)	%
Low risk(0-7)	312	83.4
Hazardous (8-15)	41	11.0
Harmful (16-19)	6	1.6
Higher risk/definite harm/Dependence (≥20)	15	4.0
Total	374	100.0

Table 9 shows that 83.4% were at low risk of alcohol use, while 11.0% were hazardous users, and only 1.6% and 4.0% were at harmful and alcohol dependence levels of alcohol use respectively. This implies that majority of students were at low risk level of alcohol use. That is, majority were either not using alcohol at all or consuming alcohol at very minimal levels. However, 11.0% were hazardous alcohol users which is a level that exposes them to risk of harmful alcohol related consequences. These findings were relatively lower than those in other parts of the continent and in the world in general. For instance, a study carried out by Young and Klerk, (2008) in Rhodes University in South Africa, revealed that the levels of low risk, hazardous, harmful and dependent use were 48.8%, 32.8%, 8.5% and 9.9% respectively. In Australia, a study by Utpala-Kumar and Deane, (2012) on current alcohol users among university students in the University of Wollongong revealed that majority (38.4%) were harmful users, followed by hazardous (34.4%) and low-risk users (27.2%).

4.6.4 Levels of Alcohol Use according to CAGE Scale

The patterns for the current use of alcohol were measured by use of a number of indicators. That is, the respondents who indicated alcohol use a month prior to the study were asked to respond to four questions (Cut-down, Annoyed, Guilty, Eye-opener) of the CAGE scale. CAGE scale is the mostly used instrument for alcohol abuse screening and consists of only four items, all in self-report format (Sajatovic & Ramirez, 2012). CAGE scale used to assess whether there was problem drinking among the respondents who indicated to have used alcohol a month prior to the study (referred to as current users). CAGE is an internationally recognized assessment instrument for identifying problem drinking and takes less than a minute to administer. Respondents who answer affirmatively to two questions are seven times more likely to be alcohol dependent than the general population (Sullivan, 2011). Table 10 shows CAGE results.

Table 10

Categories of Alcohol Users According to CAGE Scale

Category of Alcohol Users	Frequency(f)	%
Least alcohol problem (score=0)	44	37.9
Low alcohol problem(score=1)	40	34.5
Alcohol problem Clinically significant(score≥2)	32	27.6
n=116		

Table 10 shows that 27.6% of the current users (equivalent to 8.6% of the total respondents) met the criteria for problem drinking, while 37.9% were at the least alcohol problem and 34.5% met the criteria for low alcohol problem. This means among the respondents who had used alcohol in the past month, 27.6% were more likely to be dependent on alcohol. This is too big a number to be ignored. Conversely, majority (72.4%) of the current users did not meet the criteria for problem drinking. Problem drinking is not a new phenomenon among university students. For instance, a study assessing problem drinking among students in 16 universities in Germany revealed that though alcohol use was prevalent among majority of respondents, only 20% of the respondents displayed problem drinking when CAGE tool was used (Akmatov et al., 2011). This implies that in as much as alcohol use is prevalent among university students, problem drinking is not as prevalent. Özgür İlhan et al., (2008) confirming these findings, had earlier found out that among the students surveyed in five universities in Turkey, only 9.7% displayed problematic alcohol use.

Further, current users were asked to indicate days of the week when they mostly consumed alcohol, circumstances leading to alcohol use, and types of alcoholic beverage mostly preferred. All these were additional indicators of patterns of alcohol use among current users.

4.6.5 Days of the Week when Respondents Mostly Consumed Alcohol

Respondents who had consumed alcohol a month prior to the study were asked to indicate days of the week when they mostly consumed alcohol. Table 11 shows these results.

As indicated in Table 11, majority (28.1%) consumed alcohol on Fridays, while 14.9% on Saturdays, and 21.1% on both Fridays and Saturdays. However, weekends appear to have been the most preferred time for alcohol use among the respondents because in total, 79.0% consumed alcohol on Fridays or/and Saturdays or/and Sundays. There was a minority of 4.4% that consumed alcohol on a daily basis.

Table 11

Days of the Week When Respondents Mostly Consumed Alcohol

Day of the Week	Frequency (f)	%
Everyday	5	4.4
Mondays	5	4.4
Tuesdays-Thursdays	14	12.3
Fridays	32	28.1
Saturdays	17	14.9
Friday and Saturdays	24	21.0
Fridays to Sundays	8	7.0
Saturdays and Sundays	5	4.4
Sundays	4	3.5
n=114		

This preference for Fridays as drinking days in the present study deviates from Correia, Murphy, and Barnett, (2012) who reported that Thursday nights have been considered, at least heavy drinking nights for college students. This is attributed to low number of classes on Friday morning, such that students with no classes on Fridays tend to drink heavily on Thursday nights. The preference for Fridays in this study may mean that the selected universities schedule classes even on Fridays, hence alcohol users have academic responsibilities to take care of other than indulging in alcohol. However, Woodyard and Hallam, (2010) support this weekend preference by observing that among the sampled students, there was higher alcohol consumption on weekends among those who reported alcohol use.

FGDs data also revealed that alcohol use in the sampled universities mostly occurred on weekends while those addicted did so on a daily basis as pointed out in Excerpt 1.

Excerpt 1

Researcher: When during the week do students consume alcohol in this university?

James from Public University D: Those who use alcohol do so mostly on Fridays, Saturdays and Sundays. However, there some who drink throughout because the hard liquor is cheap. Some rob people to sustain their drinking habits. But I must point out that this does not always happen during the semester. You will find that students consume alcohol mostly at the

beginning of the semester after receiving HELB loan while others tend to drink towards the end of the semester because of examination anxiety and lack of preparedness for the same.

Jackie from Private faith based University A: Most revellers here consume alcohol from Thursdays through weekends because our lectures mostly end on Thursdays. However, there are addiction cases who do it every day.

4.6.5.1 Sources of Alcohol Supply

The current users were further asked to indicate their main source of alcohol supply. Table 12 shows these results.

Table 12

Source of Alcohol Supply

Source of Alcohol	Frequency (f)	%
On campus	5	4.4
From home	12	10.5
Dens around the university	4	2.6
Wine and spirit shops	33	28.9
Club houses/bars	58	50.9
Supermarket	1	0.9
All the above	1	0.9
Total	114	100.0

Table 12 shows that the major source of supply of alcohol was bars and club houses around the universities according to 50.9% of current users (15.5% of the respondents). While 28.9 % of current users mainly got their alcohol supply from wine and spirit shops around the university. Another 10.5% of current users mostly got their alcohol from home. Findings show that majority of the current users sourced for alcohol from club houses and bars in the universities' neighbourhoods. Similarly, Clapp et al. (2006) and Clapp et al. (2007), had earlier pointed out that bars/night clubs and parties represent the actual drinking situations and environment within which students drink and experience alcohol related problems. Some students, based on other contextual factors, drink from the privacy of their homes. Correspondingly, a different study conducted in six universities in New Zealand revealed that pubs, bars, and nightclubs were major outlets of alcohol for the students. They further noted that students tend to drink heavily in such settings (Kypri et al., 2010). Kypri, Bell, Hay, and

Baxter (2008) had earlier observed that any alcohol outlet within 1 km of university students' residence is associated with increase in alcohol related problems among drinkers (e.g. blackouts or episodes of physical aggression) and very many second-hand effects (e.g. being insulted or humiliated or having property damaged). Hingson, (2010) also noted an association of increased alcohol related problems with higher alcohol outlet density, and reducing alcohol outlet density may in turn reduce drinking related problems. This therefore puts the Kenya government and alcohol regulating bodies such as NACADA and all stakeholders to task, to re-evaluate the proximity of alcohol outlets around universities and their respective campuses.

Views from the FGDs revealed that alcohol is readily accessible to students within and without the universities. It was noted that some universities allow sale of alcohol in the students' centres.

Excerpt 2:

Researcher: Where do students mainly get their supply of alcohol?

Grace from Private faith based University A: There are so many pubs/bars in the residential area where most of us reside. In fact, it is not surprising to find a pub in the building with rental rooms where some students reside. Also, some grocery shops are stocked with alcohol. I think only a few shops in the neighbourhood don't stock alcohol.

Christine from Public University C: Alcohol is readily available to students here. This is because it is sold within the university, at the student centre and shops. In addition, there are very many pubs, illicit brew dens and, wine and spirits shops just a few meters from the gates.

4.6.5.2 Company of Alcohol Use

Alcohol use among university students is a social activity, and it is done in the company of peers (Borsari & Carey, 2006). Table 13 shows the persons who accompanied the respondents during their drinking occasions.

Table 13

Company of Alcohol Use for the Respondents

Company of Use	Frequency (f)	%
Classmates	14	12.3
Boyfriends/girlfriends	26	22.8
Roommates	3	2.6
Friends	65	57.0
Relatives	1	0.9
Alone	5	4.4
Total of current users	114	100.0

Table 13 indicates that 57.0% of current users used alcohol mostly in the company of their friends. However, only 0.9% of current users engaged in drinking in the company of their relatives. Peers who were either classmates, boyfriends/girlfriends, roommates or other friends were the main company of alcohol use totalling to 94.7%. University students, after they leave their homes, spend less time at home, and break away from their parents' immediate control. Without parents' supervision, they are more likely to engage in alcohol drinking. On the other hand, these university students might look for other relationships like peers to meet some of their other needs they think cannot be fulfilled by parents. Hence, peers replace parent's influence and peers' role is increased during university life as developing a peer network and group formation becomes a primary task for university students. This is more significant for freshmen, who undergo a shift from parental attachment to peer dependence (Ding, 2014).

4.6.6 Type of Alcoholic Beverage Consumed by Respondents

Alcohol is always drunk in one of the three major classes of alcoholic beverages: beer, wine or hard liquor, also called distilled spirits (Maisto et al., 2010). Table 14 shows the alcoholic beverages mostly consumed by the respondents.

Table 14

Type of Alcoholic Beverage Mostly Consumed by Respondents

Alcoholic Beverage	Frequency (f)	%
Beers	35	30.7
Spirits	41	36.0
Wines	26	22.8
Traditional brew	3	2.6
Beer and Wines	6	5.3
other	3	2.6
n=114		

Table 14 shows that majority (36.0%) of the current users, mostly consumed spirits, followed by beers at 30.7% and wines at 22.8%. These findings suggests that spirits were the most preferred alcoholic beverage by the respondents. This preference for spirits has also been documented in other parts of the world. Hensel, Todd and Engs, (2014) for instance noted a preference for spirits and hard liquor in their study. They attributed this to a number of factors. One, hard liquor is less expensive than beer, making it a cheaper way to become intoxicated. Secondly, it can be mixed with sweet drinks to cover the taste and lastly, it does not require acquiring a taste for the drink as beer does. On the other hand, Welcome, Razvodovsky, and Pereverzev (2011) observed a preference for beer among students (especially the Slavs) in three Canadian universities.

FGDs reports revealed that spirits are the most abused alcoholic beverage among university students. Participants of FGDs felt that spirits are popular because they are affordable and easily accessible for a university student.

Excerpt 3

Researcher: What alcoholic beverages are most consumed by the students in this university?

Joseph from Public University D: Most students around here consume the cheap spirits that are mostly packed in small glass or plastic bottles. This is evidenced by the many bottles we see in the dustbins around the hostels.

Janet from Private faith based University A: The most used alcoholic beverage is spirit especially Blue moon and Jameson, though beers and wines are also consumed, but not as high

as the spirits. Students here can afford the very expensive spirits. However, the very addicted also use the cheap liquor.

4.6.8 Circumstances Leading to Alcohol Use

Students' drinking habits are influenced by a combination of personal and environmental factors. Relevant personal factors include family influences, personality, and a person's biological or genetic susceptibility to alcohol abuse. In addition, many students arrive at college with pre-existing positive expectations about effects of alcohol and often with a history of alcohol consumption. Certain campus characteristics also reinforce the culture of university drinking (NIAAA, 2002). Table 15 indicates the circumstances leading to alcohol use as reported by the respondents.

Table 15

Circumstances Leading to Alcohol Use among the Respondents

Circumstance	Frequency (f)	%
Boredom	25	21.9
When am fatigued	13	11.4
Stressed by academics	2	1.8
Socializing with certain friends	21	18.4
During campus parties/events and other parties	19	16.6
Experiencing any kind of stress	13	11.4
As a source of fun	11	9.6
All the above	10	8.8
Total	114	100.0

The respondents reported that they consumed alcohol mostly when they are bored, and when socializing with certain friends, according to 21.9% and 18.4% of the current users respectively, as shown in Table 15. Other circumstances leading to alcohol use reported were during campus parties and events (16.6%), when fatigued (11.4%), and when experiencing any kind of stress (11.4%). This means that boredom is one of the main reason that influenced alcohol use among the respondents. Other fun activities such as campus parties and private parties also were avenues for alcohol use for about 16.6% of the respondents. A significant number (18.4%) of the respondents used also while socializing with certain friends. These findings were confirmed by qualitative data from the student counsellors.

The student counsellors from the sampled universities reported myriad of circumstances that predispose university students to alcohol use. These include peer influence, affordability of alcohol, lack of coping skills, excess pocket money among others. Excerpt 4 outlines their comments.

Excerpt 4

Researcher: What do you think are the circumstances leading to alcohol use among your students?

Student Counsellor from Private faith based University B: I have counselled a number of students who are mostly referred by their respective departments; a number of them find comfort in alcohol when their relationships turn soar, or when they are experiencing any kind of pressure. Others learnt the habit earlier in life and only find it problematic whey they are caught drank by the Dean of students or the security team. New students tend to indulge in alcohol as a way of expressing their independence due to their newfound freedom.

Student Counsellor from Public University C: Having pubs everywhere, including inside the university, makes alcohol very accessible such that for students lacking coping skills in handling any frustrations, alcohol use tends to be the easier way out**.**

These findings are consistent with a study done in Nigeria by Yusuf (2010), who established that undergraduate students in Osun State University used alcohol and other substances because of peer influence, academic pressure and as a source of pleasure/fun. Findings from an Ethiopian university indicated that among those students who reported drinking alcohol, majority used alcohol to get personal pleasure, followed closely by to relieve tension and due to peer influence. Other reasons included to stay awake, to be sociable, to increase pleasure during sex, to increase academic performance and due to religious practices (Tesfaye et al, 2014). Fun and socializing were the important reasons for drinking alcohol among university students in Australia (Hernandez et al., 2013).

4.7 Relationship between Patterns of Alcohol Use among Students and Type of University

The fourth objective of this study sought to establish the relationship of alcohol use patterns between students in private faith based universities with those in public universities. The indicators of alcohol use patterns in this study were age of first use, levels of use according to AUDIT scale, levels of use according to CAGE scale, days when alcohol is mostly consumed, type of alcoholic beverage mostly consumed by the respondents, and circumstances leading to alcohol use. Chi-square tests were done to determine whether these patterns were related to the type of universities the respondents were schooling in.

4.7.1 Relationship between Age of Onset of alcohol Use and Type of University

Drinking onset is an important variable in a chain of associations leading to increased levels of alcohol involvement in young adulthood (Thombs et al., 2009). O'Gray et al., (2009) documented that early onset of alcohol use is associated with development of alcohol use disorders and involvement in other illicit drugs. Chi square test was performed to establish whether the age of initiation of alcohol use differed by type of university one attended. Table 16 shows these results.

Table 16

Age of Onset of Alcohol Use and Type of University

Age of first use		Type of University		Total
		Private FB	Public	
14 Years and below	Count	6	14	20
	% within Type of University	6.0%	5.1%	5.3%
15-17 Years	Count	25	15	40
	% within Type of University	25.0%	5.5%	10.7%
18-21 Years	Count	24	78	102
	% within Type of University	24.0%	28.5%	27.3%
22 Years and above	Count	6	23	29
	% within Type of University	6.0%	8.4%	7.8%
Total	Count	61	130	191
	% within Type of University	100.0%	100.0%	100.0%

χ^2= 22.228 df = 3 p=0.000

When chi-square was calculated for the distribution of students from both private faith based and public universities and age at which the respondents first took an alcoholic drink, a statistically significant relationship was found (χ^2= 22.228 df = 3 p=0.000) as shown in Table 16. That is, the age at which students began to use alcohol is related to the type of university they attend. The table shows that, 31.0% of the respondents from private faith based universities were introduced to alcohol use before they were 18 years, which is way before joining the university. On the other hand, 28.5% of the respondents from public universities who had ever drunk alcohol were introduced to drinking at the age of 18 years and above in comparison to 24.0% from private faith based universities. These results indicate that majority of the respondents from private faith based universities who had ever used alcohol in their lifetime were initiated to drinking during their teenage years. This may be due to the fact that these students come from well off backgrounds that can avail finances to purchase alcohol. This is because private education in Kenya is mainly accessed by students from high socioeconomic backgrounds (Mulongo, 2013; Mwiria, 2007). High socioeconomic status has been correlated positively with drinking status ("Socioeconomic groups' relationship with alcohol - IAS," n.d.). This may imply that such parents or guardians are likely to model drinking behaviours to their children (Preedy & Watson, 2004; Hernandez et al., 2013; Jones & Magee, 2014).

Similarly, Locatelli et al., (2012) attributed alcohol use by teenagers in the higher socioeconomic classes, to availability of financial resources that facilitate spending more money on alcoholic drinks, which in turn might favour higher rates of use in this population. However, Sutherland, (2012) observed that socioeconomic status does not predict early initiation of alcohol use among teenagers. This implies that other mediating variables might be involved in the association of early onset of alcohol use from students from private faith based universities, such as parental behaviour and monitoring, use of alcohol by peers, socioeconomic status of the neighbourhood and related cultural factors (Locatelli et al., 2012). Additionally, parents from high socioeconomic backgrounds in today's 24-hour economy may be greatly engaged in tight work schedules, including over-time, to meet the financial demands of their families (Strazdins, Korda, Lim, Broom, & D'Souza, 2004). This leads to less

supervision and monitoring of the children hence exposing them to risky behaviours such as alcohol use.

Hawthorne (2014), had earlier noted that students involved in alcohol use from religious affiliated colleges and universities had been doing so at least a year before joining college. Their parents may have been unaware but the peer pressure that is in friendship groups was certainly very active throughout high school. Hopkins et al., (2004) also observed that, among the students who had used alcohol in their lifetime in a Christian affiliated university, 7.6% had used alcohol before the age of 13 years, which was way before joining university. This implies that students joining religious affiliated colleges and universities are not necessarily alcohol non-users or abstainers as one would expect. In actual sense, they had learnt the behaviour from their peers and their families before joining the university. Hence any intervention to alcohol use should begin at lower levels of education. This is because, as Thombs et al., (2009) documented, age at which first alcohol use occurs is a robust predictor of lifetime alcohol abuse and dependence. Further, early onset of drinking leads to increased levels of alcohol involvement in young adulthood.

The age of initiation to alcohol use is strongly associated with later risks of problems (Rutter et al., 2011). Hingson, Heeren, and Winter (2006), also reported that the age of onset of alcohol use was inversely related not only to lifetime risks of alcohol dependence, but also to the severity and duration of dependence. Specifically, individuals who commenced drinking before the age 14, compared to those who commenced after age 21, were more likely to meet the criteria for alcohol dependence in the 10 years immediately following drinking initiation.

4.7.2 Relationship between Type of University and Levels of Alcohol Use according to AUDIT Scores

To test the relationship between levels of alcohol use according to AUDIT scores and type of university, chi-square statistic was performed at 0.05 level of significance, as shown in Table 17.

Table 17

Levels of Use according to AUDIT scores and Type of University

Level of use		Type of University		Total
		Private FB	Public	
Low risk	Count	77	235	312
	% within Type of University	77.0%	85.8%	83.4%
Hazardous	Count	12	29	41
	% within Type of University	12.0%	10.6%	11.0%
Harmful level	Count	0	6	6
	% within Type of University	0.0%	2.2%	1.6%
Dependent/ Definite harm	Count	11	4	15
	% within Type of University	11.0%	1.5%	4.0%
Total	Count	100	274	374
	% within Type of University	100.0%	100.0%	100.0%

χ^2= 19.624 df = 3 p=0.000

Based on the results (χ^2= 19.624, df=3, p=0.000), a significant relationship was found between levels of alcohol use on AUDIT scale and the type of university one attended. This means that being in a given category of alcohol users as categorized by the AUDIT is associated with the type of university one attends. Table 17 indicates that among the respondents who meet the criteria for higher risk with definite harm, majority (11.0%) came from private faith based universities while public universities had the highest number of respondents (29) who met the criteria for risky/hazardous level of use. Though literature illustrating this kind of relationship is still limited, Hawthorne (2014), alludes that faith based institutions like Christian colleges are not all places of purity in spite of strict rules whereas public/secular institutions are not all dens of iniquity**.** However, the peer group one associates with greatly influence alcohol use attitudes and behaviours. Among the students who used alcohol at higher risk of definite harm, students from faith-based universities were the majority. This could be attributed to a number of factors. One, high economic power, and as posited by Kendler et al. (2014), high social economic status tends to predict increased alcohol consumption in later adolescence and young adulthood, in that students can afford greater amounts of alcohol. Secondly, due to early onset discussed earlier, these students might have developed alcohol use disorders over time (Thombs et al., 2009)

4.7.3 Relationship between Levels of Alcohol Use According to CAGE Scores and Type of University

Table 18 shows the results of the levels of alcohol use according to CAGE scale when cross tabulation was done with the type of university.

Table 18

Levels of use According CAGE Scores and Type of University

Levels of Use		Type of University		Total
		Private FB	Public	
Least alcohol problem	Count	14	30	44
	% within Type of University	32.6%	41.1%	37.9%
	% of Total	12.1%	25.9%	37.9%
Low alcohol problem	Count	17	23	40
	% within Type of University	39.5%	31.5%	34.5%
	% of Total	14.7%	19.8%	34.5%
Alcohol problem Clinically significant	Count	12	20	32
	% within Type of University	27.9%	27.4%	27.6%
	% of Total	10.3%	17.2%	27.6%
Total	Count	43	73	116
	% of Total	37.1%	62.9%	100.0%

χ^2=1.028 df= 2 p=0.598

The chi-square results (χ^2=1.028, df= 2, p= 0.598) indicate that at 0.05 level of significance, levels of alcohol use according to CAGE were not related to the type of university one attended. CAGE scores were calculated for the current users to determine whether they met the criteria for problem drinking. The table shows that majority of the current alcohol users from both private faith-based and public universities were at low alcohol problem level. The CAGE scale is very easy to administer, hence very popular. For instance, a survey of 541 universities and colleges in America by Winters et al. (2011) on screening for alcohol problems in colleges and universities revealed that CAGE was used by 54% of these institutions. While there are limited studies relating problem drinking among students and type of university, a study assessing problem drinking among students in 16 universities in Germany revealed that 20% of the respondents displayed problem drinking. Problem drinking was measured using the CAGE questionnaire (Akmatov et al., 2011).

4.7.4 Days of the Week When Alcohol is Mostly Consumed and Type of University

To show whether there was any statistically significant relationship between days of the week when respondents mostly consumed alcohol and type of university, chi-square test was performed as shown in Table 19

Table 19

Days of the Week When Alcohol is Mostly Consumed and Type of University

Days of the week		Type of University		Total
		Private FB	Public	
Mondays	Count	3	2	5
	% within Type of University	7.0%	2.8%	4.4%
Tuesdays-Thursdays	Count	2	12	14
	% within Type of University	4.7%	16.9%	12.3%
Fridays	Count	12	20	32
	% within Type of University	27.9%	28.2%	28.1%
Saturdays	Count	0	17	17
	% within Type of University	0.0%	23.9%	14.9%
Sundays	Count	3	1	4
	% within Type of University	7.0%	1.4%	3.5%
Everyday	Count	0	5	5
	% within Type of University	0.0%	7.0%	4.4%
Fridays to sunday	Count	1	7	8
	% within Type of University	2.3%	9.9%	7.0%
Fridays and Saturdays	Count	22	2	24
	% within Type of University	51.2%	2.8%	21.1%
Saturdays and sundays	Count	0	5	5
	% within Type of University	0.0%	7.0%	4.4%
Total	Count	43	71	114
	% within Type of University	100.0%	100.0%	100.0%

χ^2=54.947, df= 8, p=0.000

When chi-square was performed on the days of the week when respondents from both types of universities mostly consumed alcohol, a significant relationship was found between the two variables (χ^2=54.947, df= 8, p=0.000) as shown in Table 19. That is days of the week when current users mostly used alcohol was associated with the university one was attending. Majority (51.2%) of current users from private faith-based universities used alcohol both on Fridays and Saturdays while majority (28.2%) from public universities drank on Fridays.

While this difference between private faith based and public universities, has not been documented, White and Rabiner, (2011) documented that weekends begin on Thursdays in many colleges and universities. They noted that excessive drinking begins on Thursdays relative to other weekdays, and this was strongly moderated by Friday class schedules. Additionally, in line with the findings of this study, Finlay et al., (2012) found that alcohol use among the sampled university students primarily occurred on Thursdays, Fridays or Saturdays. Further, a study done at University of Missouri-Columbia titled "College Student Alcohol Consumption, Day of the Week and Class Schedule" concluded that students with no Friday classes drank approximately twice as much on Thursdays as students with early Friday classes ("MU Study Finds that Friday Class Schedules Influence Drinking Habits | MU News Bureau," n.d.). Thus, the tendency of students from both types of universities to drink on Fridays and Saturdays marks the end of academic responsibilities such as classes on Fridays. Southern Methodist university, a Christian based university responding to 'Thirsty Thursdays phenomenon' recommended an increase in Friday classes to reduce excessive drinking on Thursdays (Go, 2008). Preference for Fridays and Saturdays in the present study may imply that the sampled universities schedule classes on Friday mornings. Woodyard and Hallam, (2010) supports this weekend preference by observing that among the sampled students, there was higher alcohol consumption on weekends among those who reported alcohol use.

Data from FGDs confirmed that alcohol use among university students mostly occur on Fridays and weekends as documented in excerpt 1.

Excerpt 1

Researcher: When during the week do students consume alcohol in this university?

Valerie from Private faith based University A: Drinking of alcohol here starts on Thursdays evening and continues on to Fridays and weekends. This is because most of our classes here end on Thursdays, and our students can afford to buy alcohol throughout the weekend because they mostly come from well-to-do families.

Jepitha from Public University D: Alcohol use in this university occurs mostly on Fridays through weekends, and especially at the beginning of the semester after receiving HELB loans.

However, there are some students who drink on a daily basis because they have become addicted**.**

4.7.5 Relationship between Alcoholic Beverages Mostly Consumed and Type of University

Table 20 shows the relationship between alcoholic beverage mostly consumed by current users and type of university. Students who had used alcohol a month prior to the study were asked to identify their most preferred alcoholic beverage.

Table 20

Alcoholic Beverages Mostly Consumed and Type of University

Type of Alcoholic Beverage		Type of University		Total
		Private FB	Public	
Beers	Count	14	21	35
	% within Type of University	32.6%	29.6%	30.7%
Spirits	Count	24	20	44
	% within Type of University	55.8%	28.2%	38.6%
Wine	Count	5	27	32
	% within Type of University	11.6%	38.0%	28.1%
Traditional brew	Count	0	3	3
	% within Type of University	0.0%	4.2%	2.6%
Total	Count	43	71	114
	% within Type of University	100.0%	100.0%	100.0%

(χ^2=13.847, df=3, p=0.003)

When chi-square was calculated on the type of alcohol mostly consumed by the respondents, from private faith based and public universities (χ^2=32.335, df=5, p=0.000), a significant association was found between the two variables as shown in Table 20. That is, alcoholic beverage mostly consumed by the current users differed by university. The results indicate that majority (55.8%) of current users from private faith based universities mostly consumed spirits, followed by beers at 32.6%. On the other hand wine was the most popular among current users in public universities at 36.6%, followed closely by beers at 29.6% and spirits at 23.9%. Hensel et al. (2014), also documented preference for spirits among university students. This has further been confirmed by a study of over 300 colleges which found that alcohol use occurs in those colleges and hard liquor was popular at 26% (Dowdall, 2012). Findings from

a study carried out in a small Christian-based university contradicts the findings of this study. The study revealed that majority of the students reported drinking beers more than wines and spirits (Coll, Draves, & Major, 2008) unlike the students from private faith based universities in the present study whose main beverage of choice was spirit. This difference could be attributed to the availability of many and cheap spirits in the Kenyan market, including the second generation liquor.

Data from the FGDs revealed that inasmuch as spirits were the most preferred alcoholic beverages, students from private faith based universities mostly consumed the expensive spirits. On the other hand, students from public universities consume cheap spirits when they are out of cash and mostly use beers when they receive their HELB loans. Excerpt 2 highlights these comments.

Excerpt 2

Researcher: What alcoholic beverages are most consumed by the students in this university?

Janet from Private faith based University A: The most commonly used alcoholic beverage among our students is spirit especially *Blue moon* and *Jameson*, though beers and wines are also consumed, but not as high as the spirits.

Kevin from Private faith based University B: Students here consume beers in bars, though there are some who are able to purchase the very expensive spirits like vodka, and stock in their fridges. However, we still have others who take the very cheap spirits.

Joyce from Public University C: Students here take a lot of beer, especially at the beginning of the semester when they receive their HELB loans, but as the semester progresses, they are very broke so they turn to cheap spirits and illicit brews.

Gerald from Public University D: Quite a number of students here drink the cheap spirits because majority come from not so well off backgrounds. However, there are some who are able to afford beers and wines, though not so many.

4.7.6 Relationship of Circumstances Leading to Alcohol Use and Type of University

A statistically significant relationship was also found on the circumstances leading to alcohol use among current users and type of university one attended. That is, reasons for alcohol use reported by respondents differed significantly by university based on the results χ^2=35.889 df=9 p=0.000 indicated in Table 21. The table shows that majority (46.5%), of current users from private faith based universities mainly consumed alcohol as a result of boredom. On the other hand, 28.2% current users from public universities consumed alcohol during campus events or birthday parties. Studies from other parts of the world have documented that circumstances leading to alcohol use among university students are multi-contextual. However, data comparing private faith-based and public universities is very limited. Vohs, (2008) found that alcohol users in one urban private university in North-eastern United States used alcohol because it was a norm, to relieve boredom, to cope with anxiety, because of easy access to alcohol and due to low self-esteem.

In Britain, Morton and Tighe (2011) also found that the main reasons for alcohol intake among students in Coventry University were to socialise, for pleasure, to feel intoxicated, enjoyment of taste, cheap cost of alcohol and student alcohol promotions. Similarly, Tesfaye et al. (2014) observed that university students in Ethiopia consumed alcohol to socialize, to have fun and to relieve tension/stress. A study conducted in one Welsh university documented consistent findings that students who drank alcohol did so mostly when socializing or hanging out with friends who drink. Other circumstances leading to alcohol use identified in the study included to have fun, to be more confident and as a source of relaxation. Similarly, a different study done in a private university in Thailand revealed that students mostly consumed alcohol as a source of fun. Other events leading to alcohol use included campus parties, birthdays and New Year celebrations (Poonruska, 2011).

Table 21

Circumstances Leading to Alcohol Use and Type of University

Circumstances Leading to Alcohol use		Type of University		
		Private FB	Public	Total
When bored	Count	20	5	25
	% within Type of University	46.5%	7.0%	21.9%
	% of Total	17.5%	4.4%	21.9%
When tired after a busy day	Count	2	11	13
	% within Type of University	4.7%	15.5%	11.4%
	% of Total	1.8%	9.6%	11.4%
When stressed by academics	Count	1	1	2
	% within Type of University	2.3%	1.4%	1.8%
	% of Total	0.9%	0.9%	1.8%
Socializing with certain friends	Count	11	10	21
	% within Type of University	25.6%	14.1%	18.4%
	% of Total	9.6%	8.8%	18.4%
During campus parties/events and birthday parties	Count	0	7	7
	% within Type of University	0.0%	9.9%	6.1%
	% of Total	0.0%	6.1%	6.1%
When experiencing any kind of stress	Count	4	9	13
	% within Type of University	9.3%	12.7%	11.4%
	% of Total	3.5%	7.9%	11.4%
Source of fun	Count	1	10	11
	% within Type of University	2.3%	14.1%	9.6%
	% of Total	0.9%	8.8%	9.6%
When hanging out with some friends and during campus parties/events and birthday parties	Count	2	10	12
	% within Type of University	4.7%	14.1%	10.5%
	% of Total	1.8%	8.8%	10.5%
All of the above	Count	2	8	10
	% within Type of University	4.7%	11.3%	8.8%
	% of Total	1.8%	7.0%	8.8%
Total	Count	43	71	114
	% within Type of University	100.0%	100.0%	100.0 %
	% of Total	37.7%	62.3%	100.0 %

χ^2=35.889 df= 9 p=0.000

4.8 Effects of Alcohol Use among Students in Private Faith Based and Public Universities in Kenya

Objective five sought to find out the effects experienced by alcohol users as a result of alcohol use. The respondents, who had used alcohol in the past year prior to the study, were asked to check against a set of fifteen consequences that come about as a result of alcohol use while those who had not used alcohol in the past year were asked to skip this question. A total of 137 past year users had experienced at least one adverse effect of alcohol use in the past year prior to the study. Out of these, 58 were from private faith based universities and 79 from public universities. Alcohol use among university students is often done in excess and often leads to intoxication. This excessive alcohol intake among university students is associated with a variety of adverse consequences: fatal and nonfatal injuries; alcohol poisoning; blackouts; academic failure; violence, including rape and assault; unintended pregnancy; sexually transmitted diseases, including HIV/AIDS; property damage; and vocational and criminal consequences that could jeopardize future job prospects. Students who engage in excessive drinking impact not just themselves, but also the fellow students who experience second-hand consequences ranging from disrupted study and sleep, to physical and sexual assault. Furthermore, the institutions they attend expend valuable resources to deal with institutional and personal consequences of their behaviour (Correia, Murphy & Barnett, 2012). Table 22 lists the adverse consequences experienced by students under study, as a result of alcohol use.

Table 22 shows that most of the university students who had consumed alcohol in the past year prior to the study (n=137), experienced adverse consequences that included: running broke because of squandering pocket money on alcohol at 54.7%, followed by feeling sad/depressed at 49.6%. A good number of respondents experienced effects that were academic related such as 49.6% missed class because of hangovers, 14.5% missed CATs/examination or failed to hand in assignments on time because of alcohol use, and 48.9% got a poor grade as a result of alcohol use. About 29.1% engaged in unplanned sexual activity while under the influence of alcohol, while 18.9% engaged in sex without protection while under the influence of alcohol.

Table 22

Effects of Alcohol Use Experienced by the Respondents

	Total		Type of university			
			Private FB		Public	
Effect of Alcohol use	f	%	f	%	f	%
Feeling sad or depressed or nervous	68	49.6	31	53.4	37	46.8
Felt bad about oneself	65	47.4	37	63.7	28	35.4
Problems with appetite or sleeping	62	45.3	17	29.3	45	57.0
Engaged in unplanned sexual activity	40	29.1	21	36.2	19	20.4
Did not use protection when engaging in sex	26	18.9	8	13.7	18	22.7
Missed a class because of hangover	67	48.9	32	55.1	35	45.3
Engaged in illegal activities/Damaged property	33	24.1	13	22.0	20	25.0
Missed a CAT/Exam, failed to hand in assignment	20	14.5	12	20.6	8	10.1
Got a poor grade because of alcohol use	67	48.9	32	55.1	35	44.3
Got into trouble with the administration	11	8.0	3	5.0	8	10.0
Lost a friend	45	33.0	34	58.6	11	13.9
Became financially broke	75	54.7	31	53.4	44	55.6
Got injured while drank	31	22.6	8	13.7	23	29.1
Involved in a physical fight while drank	26	18.9	1	1.7	25	31.6
Fell sick because of alcohol use	67	48.9	18	31.0	49	62.0
Total	137	100	58	100	79	100

Other effects experienced included falling sick due to alcohol use by 48.9%, getting injured while under the influence of alcohol by 22.6% and involving in a fight while under the influence of alcohol by 18.9%. Thus, being broke as a result of alcohol use was the most experienced adverse effects of alcohol use among the past year users. Notably, 49.6% and 48.9% missed a class and got a poor grade respectively because of alcohol use. Past year users also engaged in risky sexual behaviours while under the influence of alcohol as reported by 29.1% and 18.9% who engaged in unplanned sexual activity and in sex without protection respectively. Additionally, personnel in the departments/directorates of student welfare reported a number of effects of alcohol use they had witnessed with their students within and without the university precinct. Among the effects identified by most personnel included intoxication and blackouts, injuries, poor academic performance, alcohol abuse and dependence, dropping out of school and suspension/expulsion from the university. Excerpt 1 outlines a few comments that highlighted these effects.

Excerpt 1

Researcher: What are some effects that students experience due to alcohol use?

Student Counsellor from Public University D: We have lost students and staff through death. Last year one student and a lecturer died after consuming adulterated liquor. We have also had quite a number of students admitted at the sanatorium; they are mostly picked from their rooms or pubs unconscious once their roommates or friends alert us, and are immediately admitted for treatment. Some take a number of days to recover from coma after excessive intoxication. I have also been called to attend to emergency cases by scared students when drank roommates get intoxicated to the level of being unconscious. When this happens, we call the ambulance and have them admitted at the university clinic immediately. We also have a number of students who have overstayed in the university because they have not been able to catch up with their academic work due to problem drinking.

Dean of Students from Private Faith Based University A: Some of the notable effects among our students as a result of alcohol use include low commitment to academic work evidenced by missing classes. This automatically leads to poor academic performance. We also find that those students who are already dependent on alcohol do not participate in co-curricular activities because they are mostly preoccupied with alcohol.

FGDs data also revealed almost similar views in regard to the consequences of alcohol use among drinkers as highlighted by the following comments.

Excerpt: 2

Researcher: What are some effects that students experience due to alcohol use?

Liza from Private Faith Based University A: Last year there was a student who committed suicide because of financial problems. She had so many debts and I think the pressure to pay up was too much for her to bear. She thus committed suicide. She had incurred these debts because of her insatiable appetite for alcohol.

Johnston from Public University C: Drunk students behave so irresponsibly. We have witnessed them engaging in sexual acts in public oblivious of who is watching them. A friend went to his room in the evening after a long session of study in the library, only to find his roommate very drank and having sex with a girl who was also very drank. My friend had to leave the room and asked me to accommodate him for the night. He later learnt that the girl the roommate was with that night was not a student but a prostitute from the nearby slum.

Kellen from Public University D: Some drank students here engage in group sex oblivious of the many sexually transmitted diseases. Some female students have also been raped while under the influence of alcohol and are too ashamed to come out. The very addicted barely take a shower or change clothes and it becomes very uncomfortable to even sit next to them in class or anywhere else.

Similarly, Faulkner et al. (2006) found out that the university students surveyed experienced the following 3 months prior to their study: 27% had been involved in fights, 76% had had emotional outbursts, 77% had experienced blackouts and 39% had difficulty in concentrating, or studying and/or remembering things. In the USA, a review by White and Hingson, (2013) documented a myriad of adverse effects of alcohol use experienced by college students that year, including 1400 deaths, 600,000 injuries, more than 696,000 were assaulted by another student who had been drinking; more than 97,000 students were victims of sexual assault or date rape; 400,000 had unprotected sex while more than 100, 000 had been too intoxicated to know if they consented to having sex; more than 150,000 students developed alcohol related health problems and between 1.2% and 1.5% of students indicated they tried to commit suicide

within the past year due to drinking or drug use. Blackouts are one of the most common effects of heavy alcohol use, with a number of surveys finding that 25%-50% of students report memory loss on at least one occasion after drinking. Nearly 50% of college students who use alcohol reported hangovers, abdominal pain, and vomiting during heavy drinking episodes (Myers & Isralowitz, 2011). In Kenya, Atwoli et al (2011) reported that 55.2% of the participants using alcohol reported having experienced medical problems as a result of their alcohol use, 60.5% had engaged in unprotected sex, 62.5% engaged in sex they regretted the next day and over 60% of the participants reported engaging in scuffles, loss and damage to property and quarrels.

4.8.2 Second-hand Effects of Alcohol Use

Second-hand effects are experiences that other students have had as a result of drinking behaviours of their fellow students. Table 23 shows the second-hand effects experienced by the respondents in this study.

Table 23

Second-hand Effects of Alcohol Use among the Respondents

Second hand effects	Total		Type of University			
			Private FB		Public	
	f	%	f	%	f	%
Sleep disturbance	216	57.7	43	43.0	173	63.1
Distracted from studies	156	41.7	24	24.0	132	48.2
Engaged in a fight/quarrel	77	20.5	14	14.0	63	23.0
Sexually harassed	39	10.4	5	5.0	34	12.4
Property damaged by a drunk student	77	20.5	16	16.0	61	22.3
Property stolen by a student who engage in drinking	45	12.0	2	2.0	43	15.7
Baby sat a drank student	103	27.5	24	24.0	79	28.8
Relationship got strained	130	34.8	50	50.0	80	29.2
Injured by a drank student	34	9.0	4	4.0	30	10.9

Table 23 shows that the majority (57.7%) of the students had disturbed sleep, 41.7% were distracted from their studies, 27.5% took time off to "baby sit" or take care of drunk students, 34.8% had relationships strained as a result drinking habits of a fellow student, 10.4% were sexually harassed and 20.5% had their property damaged by drunk students. The FGD participants confirmed that they too had gone through varied adverse experiences as a result of alcohol use related behaviours of their colleagues as documented in Excerpt 3.

Excerpt 3

Researcher: What effects have you or other students experienced as a result of alcohol use by other students?

Nelly from Private faith based University A: I live outside the campus, just a few meters from the gate and from Thursday through weekend we do not sleep because of the loud music from this new and high-class club just a few meters from the University gate. There are also so many other mini-pubs in the plots where we live. Unfortunately when students drink, they are so rowdy thereby causing a lot of disturbances in our residences. We also lose personal items through theft and most of those associated with stealing are alcohol addicts.

Nelson from Private faith based University B: The students who drink heavily are really a nuisance. They keep borrowing money from us and it can get really annoying. They also vomit in the washrooms or in the rooms and it becomes quite uncomfortable for us.

Peris from Public University C: Drunk students can really get abusive and violent. I have witnessed unnecessary fights between drunk students and two of my friends, and I did not like the scene. It took the intervention of the janitor to stop the fight.

Daniella from Public University D: Some of these students portray very unexpected and obscene behaviour. For instance, not too long ago, a female student who was extremely drank stripped off her clothes at the gate, which was rather embarrassing; thank God it was at night. Others get intimate in the presence of their roommates.

Studies from other parts of the world show consistent results. For example a study carried out in the US in 18 four-year colleges revealed that, among those surveyed, 27.4% have been humiliated, 16.5% quarrelled with a drunk student, 9.4% were assaulted, 14.4% had their property damaged, 56.4% had to baby sit a drank student, 63.9% had interrupted sleep or studies, 16.3% had sexual advances and 1.3 % were victims of rape or sexual assault from drank students (Nelson et al., 2009). Disturbed sleep and interruption of studies lead in the second-hand effects experienced by other students. In Vietnam, Diep et al., (2015) also observed that, of those surveyed 59.2% had sleep disturbances, 22.7% had their property damaged, 59.3% were distracted from their studies, 48.3% were insulted or involved in a quarrel, 21.0% were beaten, pushed, fought or hit, 20.0% involved in a traffic crash/accident involving a drunk student and 8.4% had unwanted sexual advances. Such high levels of second-hand effects imply that alcohol users are a nuisance to their fellow colleagues; hence the policy makers need to put in to consideration how to make the university a comfortable place for all the students.

Private faith based universities however recorded a lower level of second-hand effects as shown in Table 23. This may imply that, in as much as they recorded a higher prevalence, their policies seem protective of the non-users. Correia et al. (2012), in agreement with these observation noted that students who attend universities that ban alcohol from the entire campus were less likely to experience negative second-hand effects from drinking by other students. This may thus explain why fewer students from private faith based universities in the present study reported experiencing second-hand effects.

4.9 Counselling Interventions to Control Alcohol Use among University Students

Objective six sought to establish the counselling interventions put in place in response to alcohol use in both private faith based and public universities in Kenya. This variable was measured by asking the respondents to identify counselling interventions practiced in their respective universities in response to alcohol use, and further to indicate the ones they have accessed or participated in within their respective universities. Qualitative data from the interviews with the student counsellors in the sampled universities were incorporated in the analysis. By virtue of the role played by student counsellors in the implementation of

counselling interventions of alcohol use within the universities, their views were mostly considered from the staff sample. This information was meant to supplement information given by the students. Table 24 shows the counselling interventions identified by the respondents as already implemented in their respective universities.

Table 24

Counselling Interventions Identified By the Respondents

	Total	Types of University	
		Private FB	Public
Counselling interventions respondents were aware of	N=374 f(%)	n=100 f(%)	n=274 f(%)
Counselling services to alcohol users	290(77.5%)	75(75.0%)	215(57.4%)
Screening for alcohol use and abuse	32(8.5%)	4(4.0%)	28(7.4%)
Rehabilitation services	106(28.3%)	12(12.0%)	94(25.1%)
Public lectures on Alcohol Abuse	164(43.8%)	21(21.0%)	143(38.2%)
Support groups for alcohol users	101(27.0%)	29(29.0%)	72(19.0%)
Peer counselling training on alcohol use	196(52.4%)	42(42.0%)	154(41.2%)
Campaigns against alcohol use	157(42.0%)	25(25.0%)	132(35.3%)
Referral services to treatment and rehabilitation centres	85(22.7%)	9(9.0%)	76(20.9%)
Surveys on alcohol use and abuse	85(22.7%)	13(13.0%)	72(19.0%)
Literature on Alcohol use	140(37.4%)	34(34.0%)	106(28.3%)
Discontinuation/suspension of alcohol users	87(23.3%)	18(18.0%)	69(18.4%)

Table 24 shows that 77.5% of the students from both private faith based and public universities were aware of counselling services to alcohol users, followed by 52.4% who knew about peer counselling training on alcohol use and 42.0% were aware of sensitization campaigns against alcohol use within their universities. Screening for alcohol abuse and referral services to treatment and rehabilitation centres were least known as only 8.5% and 22.7% respectively, indicated their knowledge. However, only 28.3% and 27.0% were aware that students with alcohol problems could be referred to rehabilitation centres and to support groups respectively.

These findings depict that provision of counselling services to students with alcohol related concerns was well known by respondents, followed by peer counselling training and public sensitizations and campaigns. Confirming these findings, students counsellors reported being highly involved in helping students with alcohol use problems through counselling either individually or in a group set-up. Excerpt 1 highlights the summary of the comments raised by all the counsellors.

Except 1

Student Counsellor from Private faith based University A: I work in this centre which is mandated to deal with all the health related issues concerning our students and alcohol and drug abuse is part of it. All those students referred to me are counselled either individually or in a group. I highly utilize brief motivational interviewing approach when counselling students with alcohol use problems. Peer counsellors are also trained to offer support to their peers struggling with alcohol use problems

Student Counsellor from Public University D: We offer counselling services to students who have been identified and referred by peer counsellors, class representatives, the faculties and security department. The counselling department also advertises group counselling services for students struggling with alcohol related problems.

This excerpt revealed that counsellors in sampled universities highly utilize their counselling skills in helping students with alcohol use problems. One counsellor confirmed using brief motivational interviewing while counselling students with alcohol related problems. Consistent with the findings of this study, Helmkamp et al., (2003) identified the counselling service as being part of interventions to alcohol use among students in colleges and universities. Similarly, Carey, Carey, Henson, Maisto, and DeMartini, (2011) noted that face-to-face counselling improved the behaviour of mandated students who were referred because of violations related to alcohol use. Counselling through brief motivational interviewing has been found to be effective in reducing alcohol use and related negative consequences (Larimer, Cronce, Lee, & Kilmer, 2004). Counselling service especially using brief motivational interviewing strategy has been widely utilized in universities to reduce harm related to alcohol

use or to generally reduce alcohol abuse (Carey et al., 2011; Feldstein & Forcehimes, 2007; Larimer, Cronce, Lee, & Kilmer, 2004; Scholl & Schmitt, 2009).

This study also found out that alcohol related information/or psycho-education on alcohol through sensitization forums and availing literature was widely identified by respondents as available in their respective universities as indicated by 43.8% and 37.4% respectively. This kind of intervention is commonly referred to as education/information based intervention. It is one of the most common responses to student drinking by universities (Hingson, 2010; Saltz, 2004; Thadani, Huchting, & LaBrie, 2009). However, educational programmes alone have been found to be ineffective (Hingson, 2010). Peer education/counselling training programmes were also identified as being in existence by 52.4% of the respondents. This implies that over a half of the respondents were aware that peer counsellors/educators were well equipped to assist students with alcohol use problems. These findings were confirmed by student counsellors from the four universities who affirmed that they not only trained the students on ADA, but staff from all the departments are also incorporated in the trainings. Excerpt 2 outlines these comments.

Excerpt 2

Student Counsellor from Private faith based University A: The University is very supportive in the fight against alcohol use in that through this centre, staff and peer educators have been undergoing training on alcohol and drug abuse on a regular basis. Both staff and peer educators have also been sensitized on how to identify students with alcohol related problems and to refer them to this centre.

Student Counsellor from Private faith based University B: Peer counsellors have been trained on how to facilitate behaviour change among alcohol abusing colleagues and on how to refer students with alcohol use problems.

Student Counsellor from Public University C: The counselling division in the student welfare department is very upbeat in controlling alcohol and drug abuse in the university. We do this through organizing workshops for students and staff on ADA. Our trainings are open to all, not just the peer educators. NACADA really supports us in this.

These comments from student counsellors reveal that alcohol education is widely done in these universities with the intention of equipping many students and staff with skills on how to deal with abuse of alcohol and other drugs in the universities. Alcohol education is a common practice in universities in other parts of the world. This education is done through training peer educators who then help students with alcohol problems reduce their alcohol use (Butler, Jeter & Andrades, 2002; Hill & Rutgers, 1991; Russett & Gressard, 2015). This intervention has been used widely in other universities in many parts of the world (Grossman, 1994; Hunter, 2004; Jung, 2003; Seo, Owens, Gassman, & Kingori, 2013). For instance, Seo et al., (2013) observed that, peers in charge of the university residences commonly referred to as resident assistants were trained to provide early intervention and resources to new students who were at risk for alcohol related problems. They were trained on how to provide student residents who may be experiencing drinking-related problems with feedback, policy guidance, and referral to a screening and brief intervention programme on campus. Peer educators/counsellors have been found to play a very important role in promoting healthy behaviours in the areas of alcohol and drug use (White, Park, Israel, & Cordero, 2009). Alcohol education can also disseminated to all students online (Abrams, Kolligian, Mills & DeJong, 2011; Martin, Usdan, Reis & Cremeens, 2007; Larsen & Kozar, 2005).

Other interventions identified by the respondents that were also highly utilized in other universities in other continents includes screening (Helmkamp et al., 2003; Hingson, 2010; Winters et al., 2011) use of support groups, and referral for further treatment and rehabilitation (Correia et al., 2012). However, screening for alcohol use and abuse, in this study, was least known by the respondents as only 8.5% identified it as an intervention being practiced in their respective universities. This may be due to the fact that only one student counsellor reported screening students for alcohol use. Except 3 highlights this comment.

Excerpt 3

Student Counsellor from Public University D: For those already receiving counselling we screen for problem drinking using simple tools like CAGE.

Only one university screened students for problem drinking using CAGE scale, and only when the students are receiving counselling. However, any university that is keen on addressing

alcohol use related problems among its students needs a systematic screening process to accurately identify students who may benefit from alcohol intervention or treatment services (Winters et al., 2011). On the contrary, none of the universities sampled seemed to have a systematic screening process that is geared towards identifying students with alcohol use problems. Screening is an integral part in alcohol interventions in other universities in other continents (Amaro et al., 2010; Seigers & Carey, 2010; Winters et al., 2011). In regard to awareness of support groups as an intervention to alcohol use, Table 24 shows that 27.0% of the respondents knew that support groups were available for students with alcohol use problems in their respective universities. Qualitative data from interviews with the counsellors also indicate that only two universities utilized support groups as an intervention to alcohol use. Excerpt 4 summarizes these comments

Excerpt 4

Student Counsellor from Private faith based University A: Students referred from various sources are advised to join support groups that are mainly facilitated by peer counsellors. However, I make sure I attend all the sessions.

Student Counsellor from Public University D: Students identified to be having alcohol problems are put together and we meet with them on fortnight basis. These groups act as support systems for these students as they try to make changes regarding their alcohol use behaviours.

Referral to join support groups is key in facilitating change in problematic alcohol use among university students. Perron et al (2011) documented that fourteen universities had support groups for students on recovery from alcohol. Some of these support groups utilized the philosophies of alcoholic anonymous 12-step programmes.

Further analysis was done to assess the level of awareness of these counselling interventions to various groups of students as categorized by AUDIT and CAGE scales. Table 25 and 26 shows these results respectively.

Table 25
Counselling Interventions Identified by Categories of Alcohol Users according to AUDIT Scores

Counselling interventions identified by respondents	f(%)	Categories of Users: Low risk f(%)	Hazardous f(%)	Harmful f(%)	Dependent f(%)
	338(100%)	282(100%)	36(100%)	5(100%)	15(100%)
Counselling services to alcohol users	290(86.0%)	245(87%)	26(72%)	4(80%)	15(100%)
Screening for alcohol use and abuse	32(9%)	30(11%)	1(3%)	1(20%)	0(0%)
Rehabilitation services	106(31%)	99(35%)	6(17%)	1(20%)	0(0%)
Public lectures on Alcohol Abuse	164(49%)	138(49%)	19(53%)	4(80%)	3(20%)
Support groups for alcohol users	101(30%)	94(33%)	5(14%)	1(20%)	1(7%)
Peer counselling training on alcohol use	196(58%)	181(64%)	12(33%)	1(20%)	2(13%)
Campaigns against alcohol use	157(46%)	136(48%)	16(44%)	1(20%)	4(27%)
Referral services to treatment and rehabilitation centres	85(25%)	76(27%)	6(17%)	0(0%)	3(20%)
Surveys on alcohol use and abuse	85(25%)	74(26%)	10(28%)	1(20%)	0(0%)
Literature on Alcohol use	140(41%)	133(47%)	6(17%)	1(20%)	0(0%)
Discontinuation/suspension of alcohol users	87(26%)	71(25%)	5(14%)	1(20%)	10(67%)

Table 25 shows that 338(90.4%) respondents knew at least one counselling intervention practiced in their respective universities. The results further show that, majority of those who were aware of at least one counselling intervention, were low-risk users. For instance, among those who responded, 49% of low-risk users were aware of public lectures on alcohol use and only 20% of those at the dependent level of alcohol use knew about them. Public lecturers mostly used by the universities surveyed are campus-wide awareness campaigns and education sessions to the student population. Though popular and meant to reach all, ("New insights on college drinking," n.d.), they were not known to all and especially among those with alcohol

use problems. This is because heavy alcohol users are least concerned about their drinking ("Educating College Students on Drinking Risks May Temporarily Help Lessen Drinking Behaviors, Study Finds," n.d.). Thus, less likely to seek help or attend a sensitization forum. Therefore, psychologists in the field of alcohol use in colleges and universities are recommending identification of the most at risk groups such as new students, or those mandated to undergo counselling due to alcohol-related offenses, or problem drinkers or those seeking medical care in the health centres (Miller, 2013b). On the other hand, counselling services to alcohol users were relatively well known by low risk, hazardous, harmful and dependent users at 87%, 72%, 80% & 100% respectively for those who indicated knowledge of any intervention. This may be due to the fact that counsellors are very key in the orientation programmes for all new students and their offices centrally located for easier accessibility by students in need of counselling. Table 26 shows further shows that most of the counselling interventions were not well known to the current alcohol users.

Table 26

Counselling Interventions identified by Categories of Alcohol Users according to CAGE Scores

Counselling interventions identified by respondents	f(%)	Least alcohol problem f(%)	Low alcohol problem f(%)	Alcohol problem clinically significant f(%)
	102(100%)	38(100%)	33(100%)	31(100%)
Counselling services to alcohol users	79(77%)	29(76%)	30(91%)	20(65%)
Screening for alcohol use and abuse	10(10%)	7(18%)	3(9%)	0(0%)
Rehabilitation services	23(23%)	13(34%)	3(9%)	7(23%)
Public lectures on Alcohol Abuse	52(51%)	24(63%)	13(39%)	15(48%)
Support groups for alcohol users	21(21%)	8(21%)	6(21%)	7(23%)
Peer counselling training on alcohol use	39(38%)	24(63%)	7(21%)	17(55%)
Campaigns against alcohol use	42(41%)	19(50%)	6(18%)	17(55%)
Referral services to treatment and rehabilitation centres	19(19%)	9(24%)	4(12%)	6(19%)
Surveys on alcohol use and abuse	22(22%)	11(29%)	4(12%)	4(13%)
Literature on Alcohol use	30(29%)	22(58%)	4(12%)	4(13%)
Discontinuation/suspension of alcohol users	20(20%)	3(8%)	14(42%)	3(10%)

Table 26 illustrates that, out of 114 current users of alcohol, 102(89.4%) were aware of at least one counselling intervention practiced in their respective university. However, the number that was aware of any single intervention was very low. For instance, only 29% and 42% were aware of sensitization campaigns and literature on alcohol use, yet these interventions are generally public educational programmes. This is an indication that these interventions do not adequately reach the alcohol consumers. Many people with alcohol use problems do not access treatment or any intervention often because they do not realize they have a problem. Other individuals may not have a diagnosable disorder but may be at risk of alcohol-related problems ("alcohol screening and brief interventions a guide for public health practitioners", n.d). According to a WHO expert committee (Screening and brief intervention for alcohol problems in primary health care," n.d), there is need for efficient methods to identify persons with problem drinking behaviours such as harmful and hazardous users before health and social consequences become pronounced. The committee also recommended development of strategies that could be applied in primary care settings using minimum time and resources. However, not all those who have alcohol use problems access regular health care, and for those who do, their drinking problems may not be detected. Hence, universities should establish rigorous interventions to identify students with alcohol use problems because they may not necessarily seek these interventions ("alcohol screening and brief interventions a guide for public health practitioners", n.d).

This variable was further measured by checking the extent to which these interventions were accessed by university students. The respondents were asked to check against the interventions they had accessed while learning in their respective universities. Counselling interventions for alcohol use are not necessarily tailor-made for just the alcohol users. Educational-informational interventions such as sensitization programs are public program that mainly targets all the students. However, some are very specific to alcohol users, for instance, referral to rehabilitation centres for the students already dependent on alcohol. Table 27 shows interventions accessed by students in their respective universities.

Table 27

Counselling Interventions Accessed by the Respondents

Counselling interventions accessed by the respondents	Total(374) f(%)	Types of University	
		Private FB (100) f(%)	Public (274) f(%)
Attended a public lecture on alcohol use and abuse	161(43.0%)	26 (26.0%)	135(49.3%)
Attended sensitization campaign against alcohol abuse	88(23.5%)	7(7.0%)	81(29.6%)
Read posters/brochures within the university about alcohol abuse	150(40.5%)	37(37.0%)	113(41.2%)
Received an email from the administration campaigning against alcohol use	21(5.6%)	6(6%)	15(5.5%)
Attended peer counselling training on alcohol use	116(31.0%)	23(23%)	93(33.9%)
Counselled by a peer counsellor on alcohol use	41(10.9%)	6(6.0%)	35(12.8%)
Underwent screening of alcohol use	16(4.2%)	0(0.0%)	16(5.8%)
Received counselling because of alcohol use	18(4.8%)	0(0.0%)	18(6.7%)
Referred to a hospital or treatment/rehabilitation facility	7(1.9%)	0(0.0%)	7(2.5%)
Joined a support group because of alcohol use	16(4.2%)	2(2.0%)	14(5.1%)
Participated in surveys on alcohol use and abuse	41(10.9%)	11(11.0%)	30(10.9%)

Table 27 indicates that majority of the respondents (43.0%) had attended a public lecture on alcohol use and abuse, followed by reading literature on alcohol use by 150 (40.5%) and attending a training/peer counselling training on alcohol use by 116 (31.0%) respondents. Access to various counselling services is much higher in public universities than private universities. These findings indicate that educational counselling interventions such as public lecturers, sensitization forums and literature on alcohol use were the most accessed by the respondents. Students Counsellors from the four universities highly utilized educational informational interventions. These included movie nights, public lectures, door-to door campaigns and concerts focusing on alcohol and drug abuse as highlighted in Excerpt 5

Excerpt 5

Student Counsellor from Private faith based University A: We show case movies with themes related to alcohol and drug abuse (ADA). We also sensitize new students on ADA during the orientation week. In addition we also organize public lectures on ADA. The university has also allowed us to use religious meetings as forums for sensitization against alcohol abuse.

Student Counsellor from Public University C: Each counsellor is assigned a faculty and is responsible for organizing sensitization campaigns in that faculty. Staff from NACADA have been very instrumental during these meetings. We also bring on board recovering addicts to talk to our students during such forums as well as during the orientation week.

Student Counsellor from Public University D: The counselling department is very keen on responding to alcohol misuse in the university. In this regard, we organize concerts focusing on ADA related themes. We also carry out door-to-door campaigns against ADA within the campus and also to students living off campus. We also invite staff from NACADA to sensitize the new students on ADA related issues during the orientation week.

The popularity of educational counselling interventions as a response to alcohol use among university students was documented by Thadani et al (2009). Such interventions are mainly aimed at educating the students on the health risks associated with alcohol use. However, approaches that only provide information about the health risks linked to alcohol misuse have been found less effective in reducing drinking (Dowdall, 2012). Studies which have aimed at examining the impact of public education campaigns have generally reported no impacts on the levels of alcohol consumption. Such campaigns have modest effects on improving knowledge about alcohol but have not been demonstrated to lead to a change in behaviour (Slaymaker, Brower & Crawford, 2008). This therefore implies that universities in Kenya need to integrate other interventions to control alcohol use among students besides sensitization campaigns. Educational-informational counselling interventions stemmed from the belief that lack of knowledge or awareness of alcohol-related health risks contributes to problem drinking. However, knowledge-based interventions fail to consider the complexity of motives for drinking; and although they are effective in changing alcohol-related attitudes and knowledge,

they have been found to produce little measurable change in drinking behaviours among university and college students (Larimer & Cronce, 2007; Thadani et al, 2009).

Further analysis shows that majority of services were accessed by low risk users as shown in Table 28.

Table 28

Access to Various Counselling Interventions and AUDIT Scores Categories

Counselling interventions accessed on alcohol use	Total f(%)	Low risk f(%)	Hazardous f(%)	Harmful f(%)	Dependent f(%)
	277(100%)	230(100%)	28(100%)	5(100%)	14(100%)
Attended a public lecture on alcohol use and abuse	161(58%)	137(60%)	19(68%)	3(60%)	2(14%)
Attended sensitization campaign against alcohol abuse	88(32%)	79(34%)	7(25%)	1(20%)	1(7%)
Read posters/brochures within the university about alcohol abuse	150(54%)	127(55%)	9(32%)	1(20%)	13(93%)
Received an email from the administration	21(8%)	19(8%)	2(7%)	0(0%)	0(0%)
Attended peer counselling training on alcohol use	116(42%)	109(47%)	5(18%)	0(0%)	2(14%)
Counselled by a peer counsellor on alcohol use	41(15%)	33(14%)	6(21%)	0(0%)	2(14%)
Underwent screening of alcohol use	16(6%)	14(6%)	1(14%)	1(20%)	0(0%)
Received counselling because of alcohol use	18(6%)	11(5%)	4(14%)	3(60%)	0(0%)
Referred to a hospital or treatment/rehabilitation facility	7(3%)	7(3%)	0(0%)	0(0%)	0(0%)
Joined a support group	16(6%)	15(7%)	1(4%)	0(0%)	0(0%)
Participated in surveys on alcohol use and abuse	41(15%)	37(16%)	3(11%)	1(20%)	0(0%)

Table 28 indicates that 60% (137) of low-risk users were able to attend public lectures on alcohol use and only 2% of alcohol users at higher risk level accessed the same service. None of the high risk users at definite harm level was ever counselled or referred to a rehabilitation centre. This may imply that, though universities are vigilant to provide various interventions to alcohol use, those at risk were not able to access these services. Hence, proper

implementation strategies should be put in place to ensure that those at hazardous, harmful and dependent levels access interventions appropriate to the level of alcohol use. Further cross-tabulation of levels of use according to CAGE scores with services accessed also confirms these findings as shown in Table 29.

Table 29

Access to Various Counselling Interventions Versus CAGE Scores Categories

Counselling Intervention Accessed	Total f(%)	Least alcohol problem f(%)	Low alcohol problem f(%)	Alcohol problem clinically significant f(%)
	88(100%)	32(100)	26(100%)	30(100%)
Attended a public lecture on alcohol use and abuse	48(55%)	18(56%)	10(38%)	20(67%)
Attended sensitization campaign against alcohol abuse	16(18%)	4(12%)	3(12%)	9(30%)
Read posters/brochures within the university about alcohol	39(44%)	13(41%)	16(62%)	10(33%)
Received an email on alcohol use from the administration	5(6%)	1(3%)	2(8%)	2(7%)
Attended peer counselling training on alcohol use	13(15%)	3(9%)	3(12%)	7(23%)
Counselled by a peer counsellor on alcohol use	16(18%)	4(12%)	2(8%)	10(33%)
Underwent screening of alcohol use	3(3%)	1(3%)	0(0%)	2(7%)
Received counselling because of alcohol use	8(9%)	1(3%)	1(4%)	6(20%)
Referred to a hospital or treatment/rehabilitation facility because of alcohol use.	0(0%)	0(0%)	0(0%)	0(0%)
Joined a support group because of alcohol use	2(2%)	0(0%)	1(4%)	1(3%)
Participated in surveys on alcohol use and abuse	6(7%)	2(6%)	0	4(13%)

Table 29, shows that public lectures and sensitization campaigns on alcohol use and abuse were relatively accessible to all the three categories. For instance, 67% of students with significant alcohol use problem had attended a public lecture on alcohol use and abuse. On the other hand, for the students who had a score of two and above, which is an indication of a

significant drinking problem, only a small percentage had accessed any counselling intervention. This suggests that public sensitization campaign were fairly accessible to current users since 55% had attended a public lecture on alcohol use. Public lectures and sensitization campaigns are mainly voluntary and open to all students. Equally, Dowdall (2012) observed that many interventions used by colleges rely on either voluntary student participation or "mandated" participation. The former has real limits on efficacy. People of any age deny they have problems with alcohol, but this is even truer for younger people. Prevention programmes that rely on voluntary participation, such as sensitization campaigns widely used by the universities under study, run into attendance problems. But mandated participation has its own set of problems, including poor attendance and compliance. In addition, table 29 shows that no student with met the criteria for problem drinking had been referred for treatment or rehabilitation and only 3% had been referred to a support group. Conversely, counsellors in the four university indicated that they occasionally did refer students dependent on alcohol to hospital and rehabilitation centres. Excerpt 6 summarizes their comments

Excerpt 6

Student Counsellor from Private faith based University B: Once in a while, I encounter students who are deep in alcoholism. Such I refer to the general hospital, youth friendly wing while some I simply refer to rehabilitation centres.

Student Counsellor from Public University C: When we identify students who need rehabilitation, we involve the parents because the university does not cater for such expenses. We also involve the university management so that such students are given academic leave to seek treatment and to facilitate easier re-admission after successfully completing the treatment programme.

Referral to a rehabilitation centre is warranted for students who meet the criteria for alcohol dependence, who are experiencing problematic use including difficulty managing academic demands due to use, recurrent social problems or multiple legal problems. Referral to rehabilitation centres is also recommended where there are few heath care workers that are able to provide medically supervised detoxification, in-patient programming or intensive outpatient treatment programmes (Correia et al, 2012). Windle and Zucker, (2010) have outlined rehabilitation as one of the many treatment options available for youths with

problematic alcohol use. In general, results in Tables 28 and 29 show that respondents at risk of alcohol use problems reported low access to various counselling interventions of alcohol use. These findings are consistent with an NIAAA update of 2007 (Dowdall, 2012) that showed that out of 195 college students who met the criteria for alcohol abuse or dependence, only 5% had accessed treatment or any kind of intervention in the year preceding the survey, and only 3% of these students thought they should seek help but did not. This clearly shows a very big gap between problematic alcohol use and access to treatment that implementers of alcohol use interventions should seek to address. Qualitative data from the interviews with the counsellors revealed that, counsellors highly sensitized other members of staff, peer counsellors and student leaders to identify and refer students with problematic alcohol use for counselling. This was based on the fact that students with alcohol use problems rarely think they have a problem and are barely available for any intervention, including public sensitization campaigns. Except 7 outlines a summary of their comments

Excerpt 7

Student Counsellor from Private faith based University B: This University is an alcohol free zone and students know that. Due to this, and fear of being disciplined, students with alcohol problems rarely do self-referrals on issues related to alcohol. Students with alcohol issues are therefore mostly referred by the Dean of students and academic staff in various departments. Peer counsellors are also instrumental as referral sources. In addition, we also impress upon the student leaders to do the same.

Student Counsellor from Public University D: We have trained peer counsellors and class representatives on how to identify and refer students with alcohol related problems. We also work very closely with the security department who identify and refer any drunk and disorderly cases, but such cases are later summoned to the disciplinary committee.

Similarly, Christina-quinones (2013), documented that persons with alcohol use problems do not access treatment or any form of intervention to their problem drinking because they are oblivious of their problem. Jung, (2003) had earlier pointed out that problem drinkers in universities too do not think they have a problem or a need to change. Thus, health care professionals need to be vigilant to identify at-risk populations and intervene early to reduce the burden associated with alcohol use on individuals, families and health care institutions

(Christina-quinones, 2013). Drummond et al., (2011) in their review of alcohol needs assessment in Europe also observed a similar trend. That is, those who need alcohol use interventions do not wish to access them, and some will disengage from treatment prematurely. They further noted that of the people who need treatment, there are several factors which might influence whether or not they actually access treatment. These included identification and referral procedures, lack of willingness to access interventions and services that either lack capacity or are poorly responsive to help seeking. In addition, Dowdall (2012) noted that stigma associated with seeking help can be a hindrance to access to interventions to alcohol use. Naughton, Alexandrou, Dryden, Bath, and Giles, (2013) observed that hazardous, harmful and dependent alcohol users delay in seeking any kind of help about their alcohol problems. They noted that individuals with alcohol use problems mostly accessed interventions when their lives were disrupted by psychological impairment, legal or health problems. Thus counsellors and other implementers of counselling interventions in universities in Kenya need therefore identify ways and means of ensuring that interventions specific to problem drinkers are accessible to them and those generally meant for the whole students' population are captivating to all.

Quantitative and qualitative data in a nutshell revealed that one-on-one counselling and referral to rehabilitation centres were highly utilized in the universities. All the counsellors made use of sensitization campaigns and other educational materials to pass messages aimed at controlling alcohol use. Correia et al., (2012) Hingson, (2010) and Saltz, (2004) have documented a variety of interventions that seem to work with the university students. Hingson, (2010) for instance pointed out that individual level interventions influenced problem outcomes. These are interventions delivered to individuals rather than groups and interventions that used motivational interviewing providing feedback on expectancies or motives, normative comparison, and included decisional balance exercises (e.g., exercises that engage subjects in exploring the pros and cons of particular decisions) were more successful at reducing alcohol-related problems than a range of comparison conditions. Only two universities reported use of brief motivational interviewing as part of their one-on-one counselling, an approach greatly supported by research as quite significant in reducing alcohol use among university and college students (Hingson, 2010).

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The study was conducted in four universities in Kenya: two private faith based and two public universities. A total of 374 students from the selected universities participated in the study. The students were mainly accessed during the common units' classes. Personnel from the Department of Student Welfare/Affairs were purposively included in the study. Both quantitative and qualitative analysis was done to respond to the research questions. After analysis and interpretation of the results, the study came up with the following findings based on the objectives:

i. The prevalence of alcohol use among university students was high with over a half reporting life-time alcohol use, while 39.0% reported past-year use and 30.5% reported last-month use of alcohol.
ii. Prevalence of life-time and past-year use of alcohol among students was not related to the university one attended. However, a significant relationship was found between prevalence of current use of alcohol and type of university. That is, use of alcohol by the respondents in the past one month prior to the study was associated with the type of university one attended.
iii. In regard to patterns of use, the following were the findings: Majority of those who had ever consumed alcohol did so below the age of 21 and were mainly introduced to alcohol by their friends (either from home or in school) and family. Further, majority of respondents were low risk alcohol users at 82.1%, while 11.0%, 2.7% and 4.0% were hazardous, harmful and dependent drinkers respectively on AUDIT scale. About 27.6% of the current users showed clinically significant alcohol problem on CAGE scale. In addition, current users mostly consumed spirits and on Fridays through weekends. Boredom, socializing with certain friends and campus parties were the main circumstances leading to alcohol use among the respondents.
iv. There were mixed results on relationship between patterns of alcohol use and type of university. Some patterns were associated with type of university while others were

not. Specifically, patterns that were significantly related to the type of university included: age of initial alcohol use, levels of alcohol use according to AUDIT scores, days of the week when alcohol is mostly consumed, types of alcoholic beverage mostly consumed, and circumstances leading to alcohol use. However, levels of use on CAGE scale did not differ by university.

v. The respondents who had consumed alcohol in the past year experienced varied alcohol related effects including running broke by 54.7%, emotional disturbance by 49.6%, missing classes by 48.9%, missing CATs/examinations or failing to hand an assignment on time by 14.5%, and getting a poor grade by 48.9%. About 29.1% engaged in unplanned sexual activity, while 18.9% engaged in sex without protection while under the influence of alcohol, 48.9% had ever fallen sick and 22.6% got injured as a result of alcohol use. Respondents also experienced second hand effects as a result of alcohol use related behaviour of other students. Among those surveyed 57.7% had disturbed sleep, 41.7% were distracted from their studies, 27.5% had baby sat a drunk student, 34.8% had relationships strained, 10.4% had ever been sexually harassed, 9.0% were injured by a drunk student and 20.5% had their property damaged. A relatively lower number of respondents from private faith based universities experienced second-hand effects.

vi. The counselling interventions implemented in the universities included: Sensitization forums such as orientation sessions for new students, campaigns against alcohol and drug abuse, counselling services to the alcohol users, use of support groups, peer counselling and other trainings on alcohol and other drugs, availing literature such as posters and books on alcohol use and abuse, referral services to treatment and rehabilitation centres, conducting surveys on alcohol use and discontinuation of alcohol users. Only one university conducted screening, but only to those identified with alcohol use problems. However, in as much as these interventions are available in these universities, not all students were aware they do exist. For instance, only 78% and 42% were aware that counselling services and anti-alcohol campaigns respectively, were available for alcohol users in their respective universities. Yet all these universities have these services. No single intervention, even those that are non-specific to alcohol users, had been accessed by half of the respondents. For instance, only 43.0% had

attended a public lecture on alcohol use, 40.1% had read a poster/brochure on alcohol use and only 4.2% had received counselling because of alcohol use problems. The interventions were mainly accessed by low risk users and those with least alcohol problem.

5.2 Conclusions

Based on the summary of the findings, the following conclusions are made in relation to objectives of the study:

i. Students from both private faith based and public universities experienced high prevalence of alcohol use. As such, students in the two types of universities are prone are prone to alcohol use.
ii. Prevalence of current use of alcohol among university students was related to type of university.
iii. Majority of university students use spirits and are at low risk level of alcohol use, however a significant number met the criteria for harmful, hazardous, and problem drinking
iv. While majority of university students were at low risk level of alcohol use, patterns of alcohol use varied from one type of university to the other.
v. Alcohol use among university students seems to bring a myriad of problems. However, the most experienced ones included: running broke, falling sick, falling behind in academics and feeling depressed.
vi. Educational informational interventions were the most popular counselling interventions implemented in universities to control alcohol.

5.3 Recommendations

Based on the above conclusions, the researcher made the following recommendations:

i. University managements, counselling offices in universities and NACADA need to address the high prevalence of alcohol use among university students. This can be done through encouraging abstinence from alcohol or/and responsible drinking.

ii. Since alcohol use patterns are varied, including harmful, hazardous and problem drinking patterns, the welfare and counselling offices need to address this through the following ways.
    a. By screening students for risky patterns of alcohol use
    b. Customize interventions to fit levels of alcohol use among university students
    c. Encourage alcohol free activities/events in the universities
    d. One of the main circumstances leading to alcohol use was boredom, thus Student Welfare/Affairs Department should be proactive in organizing co-curricular activities especially on Fridays and weekends because most drinking happens on these days.

iii. The Private faith based universities need to devise strategies to enforce their alcohol use policies because banning of alcohol use within the universities is not necessarily restrictive enough because alcohol use does exist among their students.

iv. Student counsellors should diversify the interventions from just educational/informational interventions to other interventions that have been found effective with similar cohorts. Student counsellors should devise ways of identifying problem users, and provide them with interventions specifically tailored for them. Majority of students at high risk of alcohol related harm were not aware of various counselling interventions available in their respective university, thus, counsellors and all the stakeholders involved campaigns against alcohol abuse should aggressively publicise these services to at risk students

v. The management of the universities, the Government of Kenya and Commission for University Education should consider making university neighbourhoods alcohol free zones. This is because bars/clubs/wine and spirits shops around the university neighbourhoods were considered as ready access to alcohol among university students. Further, noise emanating from these facilities was reported to distract many non-alcohol users.

vi. Both types of universities should look into ways of lowering the prevalence of alcohol use because the effects are enormous and they affect both alcohol users and non-users.

5.4 Suggestions for Further Research

This study stimulates further research in the following areas:

i. This study focused on alcohol use only. A similar study can be done with other drugs to establish prevalence and patterns of use among university students.

ii. This study broadly focused on the whole student population irrespective of the level of use; a narrower study focusing on students with alcohol use problems such as hazardous users, harmful and dependent users to assess their knowledge and receptiveness to alcohol use interventions is necessary.

iii. The study established the counselling interventions already in place in these universities; further research is needed to assess the effectiveness of these counselling interventions in controlling alcohol use among university students.

iv. This study established that prevalence of alcohol use among university students in Kenya is high, further research is required to establish knowledge and perception of alcohol use in the same cohort.

v. Studies in other continents have documented myriad of interventions to alcohol use among university students, further research is required to assess the knowledge and attitudes to these interventions as well as hindrances to their implementation.

vi. Further research is needed to address why private faith-based universities recorded higher prevalence of alcohol use yet their policies do not allow alcohol use among their students.

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APPENDIX A

QUESTIONNAIRE FOR THE STUDENTS

I am conducting a study for my thesis that is designed to get feedback on prevalence, patterns, effects and counselling interventions of alcohol use among students in Private faith based and public universities in Kenya. It is hoped that the findings will help us to know the extent of alcohol use among university students and hence establish workable interventions to address the issue.

The results will be reported in general terms and will not identify individuals. **Please do not write your name on the questionnaire as your confidentiality is guaranteed**. Kindly be as sincere as possible, this will really be appreciated.

Thank you for your participation

Rebecca N. Wachira Mugo

Section A: Demographic Profile

Tick the appropriate answer

1 Sex a) Male ☐ b) Female ☐

2. What is your age
   a) 18- 20 years ☐
   b) 21-22 years ☐
   c) 23-24 years ☐
   d) Other (Please specify) _____

3. Which academic year are you?
   a) First year ☐
   b) Second year ☐
   c) Third year ☐
   d) Fourth Year ☐

4. Where do you live while taking your studies? ☐
   a) In the University hostels

b) Off campus but not with my parents ☐

c) Off campus with my parents/ guardian ☐

d) Other (Please specify)_____

5. Your institution is?

a) Public university ☐

b) Private faith based university ☐

SECTION B

This section asks you about prevalence and patterns of alcohol use. Tick or fill in the appropriate answer that fits your situation

6. Is alcohol use among university students in Kenya an issue of concern?

a) Yes ☐ b) No ☐

7. If yes, why?

a) Its relationship with crime ☐

b) Leads to poor academic performance ☐

c) causes interpersonal conflicts ☐

d) Health consequences ☐

e) Other (specify as many as possible)…….……

……..

8. Do students in your university consume alcohol?

a) Yes ☐ b) No ☐

9. If Yes, to what extent a) often ☐

b) Rarely ☐

10. When during the semester do the university students engage in alcohol drinking?

a) In the beginning of the trimester/semester ☐

b) In the middle of the trimester/semester ☐

c) Towards the end of the trimester/semester ☐

d) Any time during the trimester/semester ☐

11. Which days during the week do students tend to engage in alcohol drinking?

a) Mondays ☐

b) Tuesdays- Thursdays ☐

c) Fridays ☐

d) Saturdays ☐

e) Sundays ☐

12. What type of alcohol is **mostly** consumed by students in this university?

(Single response only)

a) Spirits ☐

b) Wine ☐

c) Traditional brew e.g. Mnazi, Busaa, Muratina ☐

d) Chang'aa ☐

e) Beer ☐

f) Second generation alcohol ☐

g) Other (Specify)……

13. Where do students **mostly** get their supply of alcohol?

a) Within campus ☐

(b) House/at home ☐

(c) Illegal brew dens around the college ☐

(d) Wine and spirit shops ☐

(e) Club house/bars in the neighbourhood ☐

(f) Other (specify) …….

14. In your entire life, have you ever taken any alcoholic drink, that is, bottled beer or spirit, traditional brew, illicit liquor etc.? (Not counting sips or tastes)

(a) Yes ☐ (b) No ☐

15. How old were you when you first took an alcoholic drink?

a) 14 years and below ☐

b) 15-17 years ☐

c) 18-21 years ☐

d) 22 years and above ☐

e) Not applicable ☐

16. Who introduced you into alcohol drinking?

a) Family member ☐
b) Friends at home ☐
c) Friends at school ☐
d) Friends at college ☐
e) Neighbours at home ☐
f) Not applicable ☐
g) Other (specify)……..

17. In the last **12 months**, have you ever taken at least 1 drink of any kind of alcohol not counting sips or tastes (a drink refers to a bottle of beer, a tot of spirit, a glass of wine, a mug of traditional brew or illicit brew).

(a) Yes ☐ (b) No ☐

	Please answer all the questions below by ticking or circling the option applicable to you in the scale below.	
18	How often do you have a drink containing alcohol? (0) Never (**Skip to no. 26**) ☐ (1) Monthly or less ☐ (2) 2 to 4 times a month ☐ (3) 2 to 3 times a week ☐ (4) 4 or more times a week ☐	19. How many drinks containing alcohol do you have on a typical day when you are drinking? (A drink refers to a bottle of beer, a glass of wine, a tot of spirit say 25ml-50ml of spirit containing 40% alcohol, a mug of traditional brew or illicit brew) (0) 1 or 2 ☐ (1) 3 or 4 ☐ (2) 5 or 6 ☐ (3) 7, 8, or 9 ☐ (4) 10 or more ☐
20	How **often** do you have six or more drinks on one occasion? 0) Never ☐ 1) Less than monthly ☐ 2) Monthly ☐	21. How often during the last year have you found that you were not able to stop drinking once you had started? (0) Never ☐ (1) Less than monthly ☐

	3) Weekly ☐ 4) Daily or almost daily ☐	(2) Monthly ☐ (3) Weekly ☐ (4) Daily or almost daily ☐
22	During the past year, how often have you failed to do what was normally expected of you because of drinking? 0) Never ☐ 1) Less than monthly ☐ 2) Monthly ☐ 3) Weekly ☐ 4) Daily or almost daily ☐	23 During the past year, how often have you needed a drink in the morning to get yourself going after a heavy drinking session? (0) Never ☐ (1) Less than monthly ☐ (2) Monthly ☐ (3) Weekly ☐ (4) Daily or almost daily ☐
24	During the past year, how often have you had a feeling of guilt or remorse after drinking? 0) Never ☐ 1) Less than monthly ☐ 2) Monthly ☐ 3) Weekly ☐ 4) Daily or almost daily ☐	25. During the past year, have you been unable to remember what happened the night before because you had been drinking? (0) Never ☐ (1) Less than monthly ☐ (2) Monthly ☐ (3) Weekly ☐ (4) Daily or almost daily ☐
26	Have you or someone else been injured as a result of your drinking? 0) No ☐ 1) Yes, but not in the last year ☐ 2) Yes, during the last year ☐	27. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you to cut down? (0) No ☐ (1) Yes, but no in the last year ☐ (2) Yes, during the last year ☐

28. In the past **30 days,** have you had at least 1 drink of any kind of alcohol?

a) Yes ☐ b) No ☐

If No, skip to question 39

29. Which days of the week did you consume alcohol in the past **30 days?**

a) Mondays ☐
b) Tuesday- Thursdays ☐
c) Fridays ☐
d) Saturdays ☐
e) Sundays ☐
f) Everyday ☐

30. Where do you most times get your supply of alcohol?

a) In campus ☐
b) House/at home ☐
c) Dens around the college ☐
d) Wine and spirit shops ☐
e) Club house/bars in the neighbourhood ☐
f) Other (specify……..

31. What type of alcohol do you **mostly** consume when you have to take alcohol (**Please specify the brand**) (one response only)

a) Spirits ☐
b) Wine ☐
c) Traditional brew e.g. Mnazi, Busaa, Muratina ☐
d) Chang'aa ☐
e) Beer ☐
f) Second generation alcohol ☐
g) Other (Specify)……

32. Whom do you drink with mostly? (**One response only**)

a) Classmates ☐
b) Boyfriend/girlfriend ☐

c) Roommates ☐

d) Friends ☐

e) Relatives ☐

f) Alone ☐

33. What are the circumstances that lead to your drinking? (Tick as many as apply to you)

a) When am bored ☐

b) When am tired after a busy day ☐

c) When am feeling stressed by my academics ☐

d) When am hanging out with certain friends ☐

e) During sporting events. ☐

f) During campus parties/events and birthday parties ☐

g) When am experiencing any kind of stress ☐

h) Drinking is my source of fun ☐

i) Other(specify) ……

34. a) Have you ever felt you needed to cut down on your drinking?

a) Yes ☐ b) No ☐

b) Have people annoyed you by criticizing your drinking?

a) Yes ☐ b) No ☐

c) Have you ever felt guilty about drinking?

a) Yes ☐ b) No ☐

d) Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover?

a) Yes ☐ b) No ☐

For questions below, kindly indicate with a tick (√) the response that applies to you

35. Do you think you presently have a problem with drinking alcohol?

a) Yes ☐ b) No ☐

36. Have you ever sought help in the university due to alcohol use?

a) Yes ☐ b) No ☐

37. If you have never sought help in the university because of alcohol use, indicate with a tick [√] the **main** reason of not doing so

Reasons for not seeking help	Tick [√] the appropriate response
a) I am not aware of any help/service available in the university	
b) I don't think I have a problem with alcohol	
c) I am afraid of disciplinary measures once am known I use alcohol	
Other reason (please specify)…….	

38. If you have ever sought help in the university due to alcohol use, kindly indicate with a tick (√) the kind of **help/services** you received.

Help/service provided to you in the university because of alcohol use	Tick [√] the appropriate response
a) counselling	
b) referred to a treatment facility	
c) followed up by a peer counsellor	
d) Given literature (e.g. Brochures, fliers, posters) on alcohol	
e) Joined a support group on alcohol use	
f) Other (please specify)……	

SECTION C: Effects of alcohol Use

39. The following are some common effects students experience as a result of alcohol use. If you have not used alcohol in the past 12 months, **go to question 40**. If you currently drink or have drank in the past 12 months, Indicate with a tick (√) if you have had any of the following problems over the **PAST 12 MONTHS** as a result of **YOUR** drinking alcoholic beverages.

No	**Problem associated with alcohol use**	Indicate with a tick (√) problems you have

		experienced as a result of using alcohol
a.	Feeling sad or depressed or nervous	
b.	Caused you to feel bad about yourself	
c.	Problems with appetite or sleeping	
d.	Engaged in unplanned sexual activity	
e.	Did not use protection when engaging in sex	
f.	Engaged in illegal activities associated with alcohol use/damaged property	
g.	Missed a class because of a hangover	
h.	Missed a CAT/ Exam or failed to hand in an assignment because of alcohol use	
i.	Got a poor grade because of drinking alcohol	
j.	Lost a dear friend because of drinking	
k.	Gotten in trouble with university administration because of behaviour resulting from alcohol use	
l.	Found yourself broke because of using pocket money on alcohol use	
m.	Got injured after an episode of alcohol use	
n.	Got involved in a physical fight	
o.	Got sick/felt unwell because of drinking alcohol	
p.	Other (specify)……..	

SECTION E: <u>Second Hand effects of Alcohol Use</u>

40. The following are **negative experiences YOU may** have experienced as a result of **alcohol use by OTHER STUDENTS**. If you currently experienced any or have ever experienced in the past, please indicate with a tick (√)

	Experiences YOU may have undergone as a result of behaviours of drunk students	Indicate with a tick(√) what you

		have ever experienced
a.	Had disturbed sleep	
b.	Distracted from my studies by a drunk student	
c.	Engaged in a quarrel or a fight with a drunk student	
d.	Sexually harassed by a drunk student	
e.	My property was damaged by a drunk student	
f.	My property was stolen by a student who engages in drinking	
g.	"Baby sat" a drunk student (Taking care of a drunk student, e.g. nursing his/her wounds, picking them from trenches etc)	
h.	Relationship got strained because of the drinking habits of a fellow student	
i.	Got injured by a drunk student	
j.	Others (please specify)……..	

SECTION F: Interventions to alcohol use in the university

41. The following are some measures/interventions of dealing with alcohol use in the universities, tick the ones practiced in your university.

No	**Interventions to alcohol use in the universities**	Indicate with a tick(√)
a.	Counselling services to alcohol users	
b.	Screening for alcohol use and abuse	
c.	Rehabilitation services	
d.	Public lectures on Alcohol Abuse	
e.	Support groups for alcohol users	
f.	Peer counselling training on alcohol use	
g.	Sensitization Campaigns against alcohol use	

h.	Referral services to treatment and rehabilitation centres	
i.	Surveys on alcohol use and abuse	
j.	Literature (e.g. posters/brochures on alcohol use)	
k.	Discontinuation/suspension of alcohol users	
	Other (please specify)…… …… ……	

42. Kindly indicate with a tick(√) the services **you have accessed or activities you have participated in** within the university in response to alcohol use and abuse

	Services accessed/activities you have participated in	Tick [√] the appropriate Response
a.	Attended a public lecture on alcohol use and abuse	
b.	Attended sensitization campaign against alcohol abuse	
c.	Read posters/brochures within the university about alcohol abuse	
d.	Received an email from the administration campaigning against alcohol use	
e.	Attended peer counselling training on alcohol use	
f.	Counselled by a peer counsellor on alcohol use	
g.	Underwent screening of alcohol use	
h.	Received counselling because of alcohol use	
i.	Referred to a hospital or treatment/rehabilitation facility because of alcohol use.	
j.	Joined a support group because of alcohol use	
k.	Participated in surveys on alcohol use and abuse	
	Other (Please specify)……	

APPENDIX B

INTERVIEW SCHEDULE FOR THE PERSONNEL IN THE STUDENT WELFARE

1. Gender a) Male b) Female
2. What is your position in student welfare/affairs department?
    i. Dean of Students
    ii. Assistant Dean of students
    iii. Games Tutor
    iv. Student counsellor
3. Is alcohol use a concern in your institution? a) Yes B) No
4. If Yes, what makes it a concern?

    _____

    _____
5. How prevalent is alcohol use among students in your university?
6. What are the alcohol use patterns among students in your university?
    a) Alcoholic beverages mostly consumed
    b) Sources of alcohol
    c) When do students mostly abuse alcohol?
7. What are some effects that students experience due to alcohol use?

    _____

    _____
8. What interventions has your department/section put in place in response to alcohol use among students in this university

    _____

    _____
9. What interventions would you recommend to the university to put in place towards control of alcohol use ----------

APPENDIX C

FOCUS GROUP DISCUSSION GUIDING QUESTIONS

1. Is alcohol use an issue of concern among students in this university? why?
2. How prevalent is alcohol use among students in this university?
3. What are the patterns of alcohol use among the students in this university? When, with whom, where?
4. What is the prevalence of alcohol use among the students in this university?
5. What are some of the effects experienced by students who use alcohol in this university?
6. What effects have you or other students experienced as a result of alcohol use by other students?
7. What counselling interventions are put in place in control of alcohol use in your university?
8. What interventions is the university employing in response to alcohol use?
9. What would you recommend to the university in regard to control of alcohol use?

APPENDIX D

THE AUDIT SCALE

1	How often do you have a drink containing alcohol? (0) Never (**Skip to no. 9**) (1) Monthly or less (2) 2 to 4 times a month (3) 2 to 3 times a week (4) 4 or more times a week	2. How many drinks containing alcohol do you have on a typical day when you are drinking? (0) 1 or 2 (1) 3 or 4 (2) 5 or 6 (3) 7, 8, or 9 (4) 10 or more
3	How **often** do you have six or more drinks on one occasion? 0)Never 1) Less than monthly 2) Monthly 3) Weekly 4) Daily or almost daily	4. How often during the last year have you found that you were not able to stop drinking once you had started? (0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily
5	During the past year, how often have you failed to do what was normally expected of you because of drinking? 0) Never 1) Less than monthly 2) Monthly 3) Weekly 4) Daily or almost daily	6 During the past year, how often have you needed a drink in the morning to get yourself going after a heavy drinking session? (0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily
7	During the past year, how often have you had a feeling of guilt or remorse after drinking? 0) Never 1) Less than monthly 2) Monthly 3) Weekly 4) Daily or almost daily	8. During the past year, have you been unable to remember what happened the night before because you had been drinking? (0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily
9	Have you or someone else been injured as a result of your drinking? 0) No 1) Yes, but not in the last year 2) Yes, during the last year	10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you to cut down? (0) No (1) Yes, but no in the last year (2) Yes, during the last year

Source: Babor, T., Higgins-Biddle, J.C., Saunders, J. & Monteiro, M.G. (2001), *The Alcohol Use Disorders Identification Test (AUDIT): Guidelines for Use in Primary Care* (2nd ed.) WHO.

APPENDIX E

CAGE QUESTIONNAIRE

1. Have you ever felt you should **C**ut down on your drinking?
2. Have people **A**nnoyed you by criticizing your drinking?
3. Have you ever felt bad or **G**uilty about your drinking?
4. Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (**E**ye opener)?

Scoring:

Item responses on the CAGE are scored 0 or 1, with a higher score an indication of alcohol problems. A total score of 2 or greater is considered clinically significant

APPENDIX F

INTRODUCTORY LETTER FROM THE UNIVERSITY

EGERTON UNIVERSITY

Tel: Pilot: 254-51-2217620
254-51-2217877
254-51-2217631
Dir.line/Fax: 254-51-2217847
Cell Phone

P.O. Box 536 - 20115
Egerton, Njoro, Kenya
Email: bpgs@egerton.ac.ke
www.egerton.ac.ke

OFFICE OF THE DIRECTOR GRADUATE SCHOOL

Ref:..... ED16/0274/10 .....

Date: 26th March, 2014 .....

The Secretary,
National Council of Science and Technology,
P. O. Box 30623-00100
NAIROBI.

Dear Sir,

RE: REQUEST FOR RESEARCH PERMIT – MS. REBECCA NJAMBI WACHIRA MUGO A – REG. NO. ED16/0274/10

This is to introduce and confirm to you that the above named student is in the Department of Psychology, Counselling and Education Foundation, Faculty of Education and Community Studies.

She is a bona-fide registered PhD. student in this University. Her research topic is **"Prevalence, Patterns, Effects and Counselling Interventions of Alcohol use Among Students in Private Christian Based and Public Universities in Kenya".**

She is at the stage of collecting field data. Please issue her with a research permit to enable her undertake the studies.

Your kind assistance is highly appreciated.

Yours faithfully,

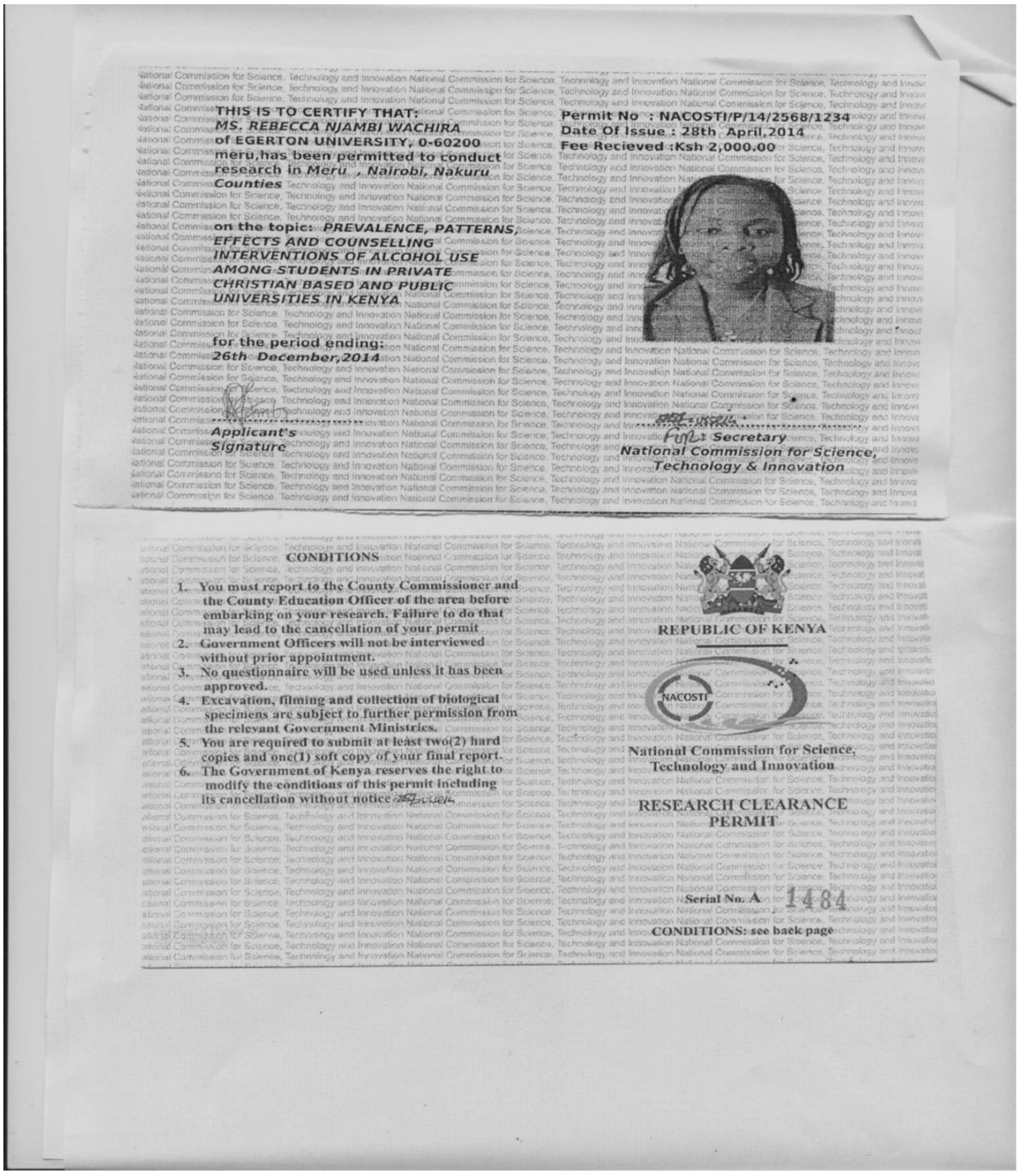
DIRECTOR, BOARD OF POSTGRADUATE STUDIES
EGERTON UNIVERSITY P.O. Box
26 MAR 2014

Prof. M.A. Okiror
DIRECTOR, BOARD OF POSTGRADUATE STUDIES

MAO/cwk

APPENDIX G

RESEARCH PERMIT



THIS IS TO CERTIFY THAT:
MS. REBECCA NJAMBI WACHIRA
of EGERTON UNIVERSITY, 0-60200
meru,has been permitted to conduct
research in *Meru , Nairobi, Nakuru Counties*
on the topic: *PREVALENCE, PATTERNS, EFFECTS AND COUNSELLING INTERVENTIONS OF ALCOHOL USE AMONG STUDENTS IN PRIVATE CHRISTIAN BASED AND PUBLIC UNIVERSITIES IN KENYA*
for the period ending:
26th December,2014

Applicant's Signature

Permit No : NACOSTI/P/14/2568/1234
Date Of Issue : 28th April,2014
Fee Recieved :Ksh 2,000.00

Secretary
National Commission for Science, Technology & Innovation

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

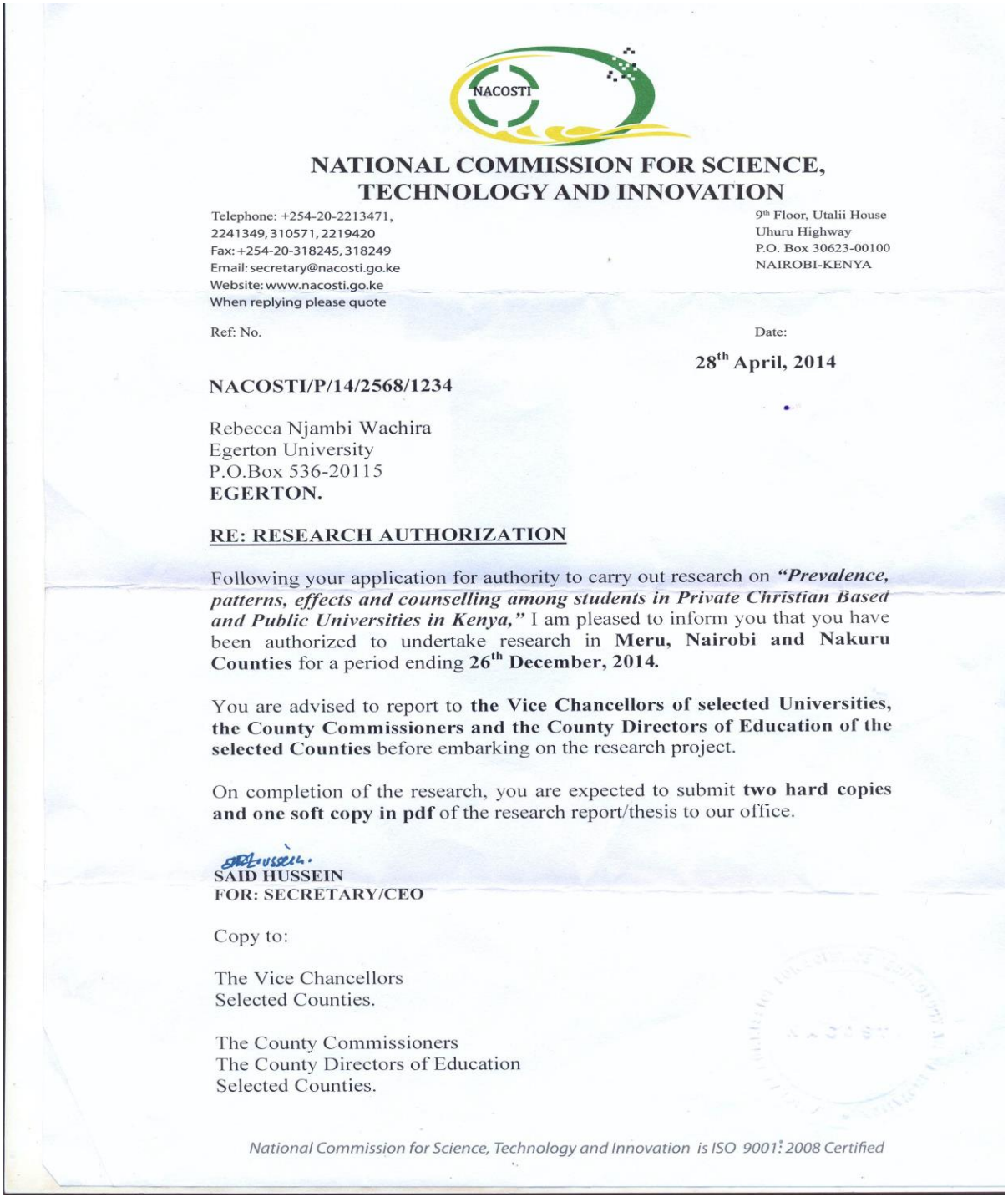
RESEARCH CLEARANCE PERMIT

Serial No. A 1484

CONDITIONS: see back page

APPENDIX H

RESEARCH AUTHORIZATION



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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2241349, 310571, 2219420
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Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.

Date:

28th April, 2014

NACOSTI/P/14/2568/1234

Rebecca Njambi Wachira
Egerton University
P.O.Box 536-20115
EGERTON.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Prevalence, patterns, effects and counselling among students in Private Christian Based and Public Universities in Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Meru, Nairobi and Nakuru Counties** for a period ending **26th December, 2014.**

You are advised to report to **the Vice Chancellors of selected Universities, the County Commissioners and the County Directors of Education of the selected Counties** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

SAID HUSSEIN
FOR: SECRETARY/CEO

Copy to:

The Vice Chancellors
Selected Counties.

The County Commissioners
The County Directors of Education
Selected Counties.

National Commission for Science, Technology and Innovation is ISO 9001: 2008 Certified