DETERMINANTS OF ALCOHOL ABUSE AMONG PEOPLE LIVING WITH HIV IN KASESE DISTRICT

BY

MUKAMBA BENEDICT

REG. 2015-M281-10008

A DISSERTATION SUBMITTED TO THE FACULTY OF HEALTH SCIENCES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF PUBLIC HEALTH (HEALTH PROMOTION) OF UGANDA MARTYRS UNIVERSITY

FEBRUARY, 2018

Dedication

I dedicate this research dissertation to my parents – Mrs. Theresa Biira and Mr. Mzee Paul Mukamba for their support towards my education.

Acknowledgment

I am greatly indebted to my lecturers at the Faculty of Health Sciences, Uganda Martyrs University, for their knowledge throughout this course. Special thanks go to my supervisor Ms. Vivienne Laing and co-supervisor Dr. Miisa Nanyangi for their f relentless efforts in providing guidance and supervision of this work from the very start to the end.

I also thank clients and health workers from the four health facilities whom I interviewed for their cooperation in responding to the questions. I thank the District Health Officer, Kasese District, the management of Kasanga Primary Health Centre III, Bwera Hospital, Kilembe Mines Hospital and Kasese Municipal Health Centre III for their support during the field study.

I am grateful to my family especially my wife, children, relatives and friends for their love, patience and support during this study and to my classmates of 2015/2016 for their encouragements and support throughout the course. Finally, I thank the management of Global Fund-Geneva for having awarded me a contract that enabled me to pay tuition and carry out the research which enabled me complete this course.

Table of Contents

List of Tables

List of Abbreviations / Acronym

AIDS:	Acquired Immunodeficiency syndrome
ART:	Antiretroviral Therapy
ART:	Antiretroviral Treatment
CSOs:	Civil Society Organizations
DRC:	Democratic Republic of Congo
HAART	Highly Active Antiretroviral Therapy
HIV:	Human Immunodeficiency Virus
NGOs:	Non-Governmental Organizations
PLHIV:	People living with Human Immunodeficiency Virus
SMART:	Specific, Measureable, Attainable, Realistic and Timely
SSA:	Sub-saharan Africa
STIs:	Sexually Transmitted Infections
USA:	United States of America
VHT:	Village Health Team

Operational Definition of Key Terms

Determinants: In accordance to this study, the term determinants are used to refer to the factors making alcohol use happen among the people.

Perceptions: This study used the word perceptions to refer to ways in which people understand and their views about alcohol use and its effects.

PLHIV: This term is used to refer to individual persons or groups that have been medically diagnosed and tested, and were found living with the Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome.

Alcohol abuse: In this study, alcohol abuse refers to the current use of locally or manufactured liquor (regardless of the quantity and frequency) by people living with HIV enrolled in HIV care and who have been educated not take any quantity of alcohol once they were enrolled on ART.

Effects of Alcohol use: This study uses this term to refer to observable behaviours among the people living with the Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome and they are on the medical Antiretroviral Therapy or Antiretroviral Treatment.

ABSTRACT

There is sufficient evidence to show that People Living with HIV (PLHIV) in Uganda abuse alcohol and yet battling with low immunity. The persistent abuse of alcohol by PLHIV is very worrying since they are susceptible to opportunistic infections and non-adherence to Anti-retroviral drugs. Although different studies have been carried on the use of alcohol in Uganda, little information is available and undocumented from people living with HIV in districts such as Kasese where alcohol is locally distilled and used for cultural and traditional purposes.

The study was informed by the social learning theory and the objectives of the study were to: examine the socio-economic determinants for abuse of alcohol among People Living with HIV in Kasese District; and identify the socio-economic effects of alcohol abuse among the People Living with HIV in Kasese District.

Methodology: A descriptive cross-sectional survey design involving interviews with a sample size of 405 respondents were purposively selected and interviewed using questionnaires. 95 respondents were from Kasanga Health Centre III, 131 respondents from Bwera Hospital, Kasese Municipal Health centre III (78) and Kilembe Mines Hospital (101) respectively.

Results: The study established various determinants for the abuse of alcohol by People living with HIV in Kasese District. The major determinants included the environment where individuals live with a significance of 000; and peer group pressure with a significance of 000. Families that brew alcohol with a significance of .002, age with a significance of .003 and monthly income with a significance of .004 were also found major determinants.

It was also found that alcohol abuse increases the risk for the spread of HIV (sig .000), increases poverty among PLHIV (sig .000) and increases accidents on roads (sig .000) were all significant

with less than the value of alpha (0.05) .The researcher concludes that the environment must be relevant to other determinants to influence the abuse of alcohol.

Therefore, the study recommended a multi-sectorial approach by involving the government leaders, community and cultural leaders, health workers in the district to sensitize and educate the people about the dangers of alcohol abuse on individual health. It was further recommended for the health workers to use public health media campaigns and other evidence based interventions such as formation of different peer support groups to assist the PLHIV with peer-to peer counseling with specific target to address socio-economic determinants associated with alcohol abuse. It is recommended to conduct future study on the alcohol consumption levels among the people living with HIV in Kasese District and how each level affects their health status.

CHAPTER ONE

INTRODUCTION

1.0 Introduction.

Alcohol is one of the drinks commonly used by some people, however, it has been associated to non-adherence to antiretroviral treatment (ART) among PLHIV, thus, increasing clients' susceptibility to opportunistic infections and increased rate of AIDS progression (Pacek *et al*, 2014; Baum *et al*, 2010). It has also been observed that increase rates of opportunistic infections increase household expenditure on health, thereby affecting the socio-economic resilience of individual households with PLHIV (Gruenewald et al., 2014). Despite the efforts made to increase awareness and dangers of alcohol consumption by PLHIV, there is evidence that people living with HIV have continued to consume alcohol even when they have treatment with anti-retroviral medicines (Wandera et al., 2015). This study therefore examined the socio-economic determinants and effects of alcohol abuse among people living with HIV in Kasese district, Western Uganda with an aim of generating information that could be used to address the gaps which are not addressed by the existing health awareness initiatives.

1.1 Background to the study.

Globally, there are 36.7 million of people living with HIV (PLHIV) and 1.8 million new infections within 2016 (UNAIDS, 2017). Eastern and Southern Africa had the majority with 19.4 million people living with HIV and the new infections were 790,000, where 12.5 million PLHIV out of the 19.4 million were accessing antiretroviral treatment by June 2017 (UNAIDS,2017). In Uganda, the HIV infection is on the rise and by 2016, HIV prevalence rate stood at 7.2% , becoming the third country after South Africa and Mozambique with the highest HIV prevalence in Africa (UNAIDS, 2017). According, to the Uganda AIDS indicator Survey,

the Mid-West region where Kasese District is located had HIV prevalence at 8.2% (Mafigiri et al., 2017). In addition, at the Uganda national level , the number of people living with HIV enrolled for antiretroviral therapy (ART) in 2012 were 438,534 , in 2013 were 564,453 totaling to 1,327,052 by the end of 2013 (MOH, 2014). This trend is very worrying posing a huge challenge to the present and future generations of the district and the entire nation.

Majority of people living with HIV and who abuse alcohol have developed alcohol use disorders and liver disease problems (Bruha, *et al.,* 2012). In the recent past, liver disease has emerged as one of the leading cause of morbidity and mortality especially among HIV positive people with a history of alcohol use (Antiretroviral Therapy Cohort Collaboration, 2010). Similarly, PLHIV who are co-infected with hepatitis are particularly more vulnerable to liver diseases and hepatitis progresses much faster in this category of people especially if they are alcohol users leading to increased rates of liver fibrosis and cirrhosis (Curry, 2013).

There is sufficient evidence that PLHIV and enrolled in HIV care, continue to consume alcohol in Uganda (Wandera *et al,* 2015; Kekwaletswe & Morojele, 2014); yet with scarcity of documented information about factors influencing them to persistently drink alcohol despite their state of health and susceptibility to opportunistic infections. According to Poznyak et al., (2014) in their Global Alcohol Consumption and Health Status Report of 2014, the alcohol consumption global episode is 17.2% and the African continent had the highest alcohol consumption episode of 6.0%. In 2012, 5.9% (3.3 million) of all global deaths, were attributed to alcohol consumption and 5.1% (139 million) of DALYs (disability-adjusted life years) of the global burden of disease and injury, were attributed to alcohol consumption.

Within African countries, Uganda has the highest levels of alcohol consumption *per capita* globally, with an estimated 9.8 L of pure alcohol consumed annually per person aged 15 years or

older, compared with 6.0 L for the WHO African Region, and 6.2 L globally (Poznyak et al., 2014). The large proportion (59%) of non-alcohol users indicates that people who drink tends to consume substantial amounts of alcohol (23.7 L *per capita* annually in Uganda compared with 16.0 L globally). Prevalence of alcohol use is high in vulnerable populations, including PLHIV (Uganda MOH, 2015). In a study about prevalence of alcohol use among PLHIV in Ethiopia, alcohol use disorders appear to be high as compared to the general population and PLHIV but not taking alcohol (Neuman *et al.,* 2012). Alcohol Use Disorders (AUDs) are associated with premature mortality in PLHIV and normally occur due to alcohol enhancing the toxicity of antiretroviral treatment (ART), increasing liver damage from concurrent infection with hepatitis C virus, and increasing the risk of opportunistic infection due to decreased effectiveness of ART and exacerbation of immune suppression.

Kresina et al., (2016) noted that hazardous levels of alcohol use are associated with non-adherence to ART medication; late presentation to HIV/AIDS care, higher viral load during the course of HIV treatment, accelerate decline of CD4 cells in HIV infected persons, faster disease progression and development of resistant strains of HIV. Alcohol use has also been associated with increased HIV risk behaviors, including unprotected sex, multiple sexual partners and high-risk injection behaviors. Hormes *et al.,* (2012) found that any alcohol consumption decreases the overall survival among the PLHIV by more than two years if the frequency of consumption is once per week or greater, and by 6.4 years with daily consumption. Other studies have shown that most PLHIV fear the interaction between their medication and alcohol and, therefore, skip medication while drinking alcohol (Goar *et al.,* 2011). Such studies show that understanding the burden of alcohol use and its associated ills among the PLWHIV in the context of Uganda is essential in designing a locally appropriate interventions to reduce alcohol consumption that

could potentially lead to reduced HIV transmission risk behaviors. In order to come up with strong recommendations, this study was found essential for Uganda and Kasese District in particular.

Kasese District is classified among the districts in Uganda with the highest HIV prevalence rate of 8.2% compared to the National prevalence of 7.3% (UIAS, 2011). Moreover, Kasese District prevalence weighted by Antenatal Clinic (ANC) prevalence stands at 4.7 % with an estimated 15,122 adults and 1,790 children less than 15 years living with HIV (PEPFAR Burden Report, 2015).

The drivers of the epidemic in the district include: existence of high number of hotspots in six landing sites, mushrooming urban centers, rapid industrialization, cross border trade and wars that attracted multitudes of uniformed personnel and rural to urban migration, high prevalence of STIs, low utilization of ANC, unsupervised deliveries, sub-optimal scale-up of ART services, Gender inequalities and Gender Based Violence (UIAS, 2011).

There are 99 health facilities in Kasese District: 3 hospitals, 9 health center IVs, and 30 health center IIIs; the remaining facilities are health center IIs. These centers are trying to increase and improve the services they are permitted to offer including ART services (UDHS Report, 2016).

According to UBOS, (2012), the average monthly household income of Kasese District was UGX 282,300 compared to Kampala city with an average monthly income of about UGX 960,000 followed by the Central region (UGX 389,600).This shows the extent how Kasese District is still impoverished coupled with HIV/AIDS disease burden.

1.2 Statement of the problem

There is evidence to show that PLHIV in Uganda abuse alcohol and yet battling with low immunity (Wandera *et al,* 2015; Kekwaletswe & Morojele, 2014). The persistent abuse of

alcohol by People Living with HIV is very worrying coupled with their poor immunity and susceptibility to opportunistic infections (Pacek *et al,* 2014; Baum *et al,* 2010). Owing to the dangers associated to alcohol abuse, government of Uganda, NGOs, CSOs and religious bodies have increased awareness about the abuse of alcohol, its effects on health and among PLHIV in particular, but some PLHIV enrolled on ART still continue to abuse alcohol despite of the health warnings **(**Kinyanda *et al.,* 2013). If the persistent abuse of alcohol is not urgently addressed, it can also lead to the PLHIV practice risky sexual behaviors such as having multiple partners, engaging in unprotected sex, which pre-exposes them to re-infection or infecting new partners with HIV virus (Bajunirwe *et al.,* 2013; Baliunas *et al.,*2010). Also, alcohol abuse can lead to other alcohol- related consequences for example traffic accidents, increasing financial expenditures, debts, and violence among others (Gruenewald et al., 2014).

Although literature exists about alcohol consumption among PLHIV in general, there's still limited and undocumented specific information about socio-economic determinants of alcohol abuse and its effects among people living with HIV in Kasese District.

1.3. General Research Question

What are the socio-economic determinants of alcohol abuse among the PLHIV in Kasese District?

1.3.1 Research questions

i. What are the socio-economic determinants for abuse of alcohol among people living with HIV in Kasese District?

ii. What are the socio-economic effects of alcohol abuse among people living with HIV in Kasese District?

1.4 General objective

The general objective of the study is to examine the socio-economic determinants of alcohol abuse on the PLHIV in Kasese District.

1.4.1 Specific objectives

i. To examine the socio-economic determinants for abuse of alcohol among PLHIV in Kasese District.
ii. To identify the socio-economic effects of alcohol abuse among the people living with HIV in Kasese District.

1.5 Scope of the Study

Geographical location

The study was carried from the PLHIV of Bukonzo County and Kasese Municipality in Kasese District. The district was chosen because of increasing number of PLHIV who use both local and imported alcohol despite being enrolled on ART. The district is also known for its local participation or brewing local alcohol, which is commonly known as *Kasese Waragi* (Kinyanda *et al*, 2013).

Content of the study

The study examined the socio-economic determinants that influence the PLHIV to abuse alcohol and its effects in their daily life. This was achieved by administering questionnaires The researcher also went ahead to use secondary methods of data collection through documentary review in order to establish the reason for failure of government, NGOs and the civil society organizations to convince people to stop abusing alcohol.

1.6 Significance of the study

The study is significant since it add information to the existing body of knowledge in reference to HIV and alcohol substance abuse in Uganda and Kasese District in particular. The government of Uganda and Ministry of Health in particular will find this study informative since the information can be used as a basis of public health intervention strategies that target behaviourial change. Besides, the people of Kasese use alcohol as one of the sources of their income. The information generated may be used for the government of Uganda, NGOs, CSOs and religious bodies to intervene by providing alternative sources of income to people if the efforts against alcohol are to have significant impact.

The people of Kasese and the local councils in particular are hoped may also use the findings of the study to examine some of their socio-cultural customs and its effects on population health therefore informing their strategies on regulating alcohol abuse

1.7 Justification

Alcohol use among people and PLHIV in particular has become common with negative effects in Uganda (Kinyanda *et al.*, 2013). Areas such as Kasese District has been among other places where the use and drinking of alcohol has been associated to cultural values and traditions of the people. It has been one of the drinks of choice at social functions such as wedding parties, community and family parties. Amidst such situation, medical personnel have been associating the use of alcohol to different diseases such as the liver complications and lungs in human body (Pacek *et al.* 2014). A study conducted by Robson,(2010) also revealed that the use of alcohol by PLHIV weakens immunity and affects their adherence to treatment. Alcohol also influences people into unprotected sexual intercourse (Crutzen *et al.*, 2012). These among other factors have influenced the government and different NGOs to increase efforts to curb down the use of

alcohol. Despite of this, some people in Kasese District still find the abuse of alcohol significant to their lives despite the negative consequences. This study is premised on the fact that by establishing determinants of alcohol abuse, it would inform a basis for intervention strategies to address the alcohol abuse faced by PLHIV.

1.8 Theoretical framework

1.8.1 Social Learning Theory

The social learning theory shows that the use of alcohol is a learned behavior and social learning is the most common way that people learn (Horvath *et al*, 2014). For this study, the focus was on the learning that occurs within social groups that may include the family, peers groups, and the larger community. Social learning theory is premised on two learning principles. 1) Classical conditioning meaning that a specific stimulus causes a specific response. For instance, if people see alcohol (Stimulus), alcohol users will salivate by responding to the stimulus (Horvath *et al*, 2014).

Operant conditioning is the second learning principle. This type of learning occurs due to the cause-and-effect relationship between a behavior and its consequences. Addiction is a learned behavior because the initial pleasure or enjoyment was rewarding. The main influences of an individual's actions are motivational factors, behaviours, social norms and perceived control of behavior.

Much of the longitudinal research regarding planned behaviour and drinking of alcohol has predicted that positive attitudes towards alcohol correlate positively with future alcohol use (Collins *et al.,* 2011). Obsessive alcohol use is linked to reinforcement principles, because alcohol use stimulates pleasure centers of the brain, an individual seeks this feeling repeatedly, causing positive reinforcement.

Implications of the social learning theory

The theory shows that abusing of alcohol is learnt. The socio-economic determinants were also found applicable during the research study in Kasese District since some of the respondents asserted that using alcohol is learnt through socialization by different groups such as peer groups, family and community especially those that brew alcohol locally. Whether learnt or not, the constant abuse of alcohol leads to addiction as one of the socio-economic consequences. The learning theory is important to reveal that peer groups are important social determinant to the use of alcohol among people in Kasese District.

1.8.2 The Conceptual Framework

The conceptual frame in figure 1.5 shows that there are various determinants of alcohol use. It shows the relationship of variables as used in this study.

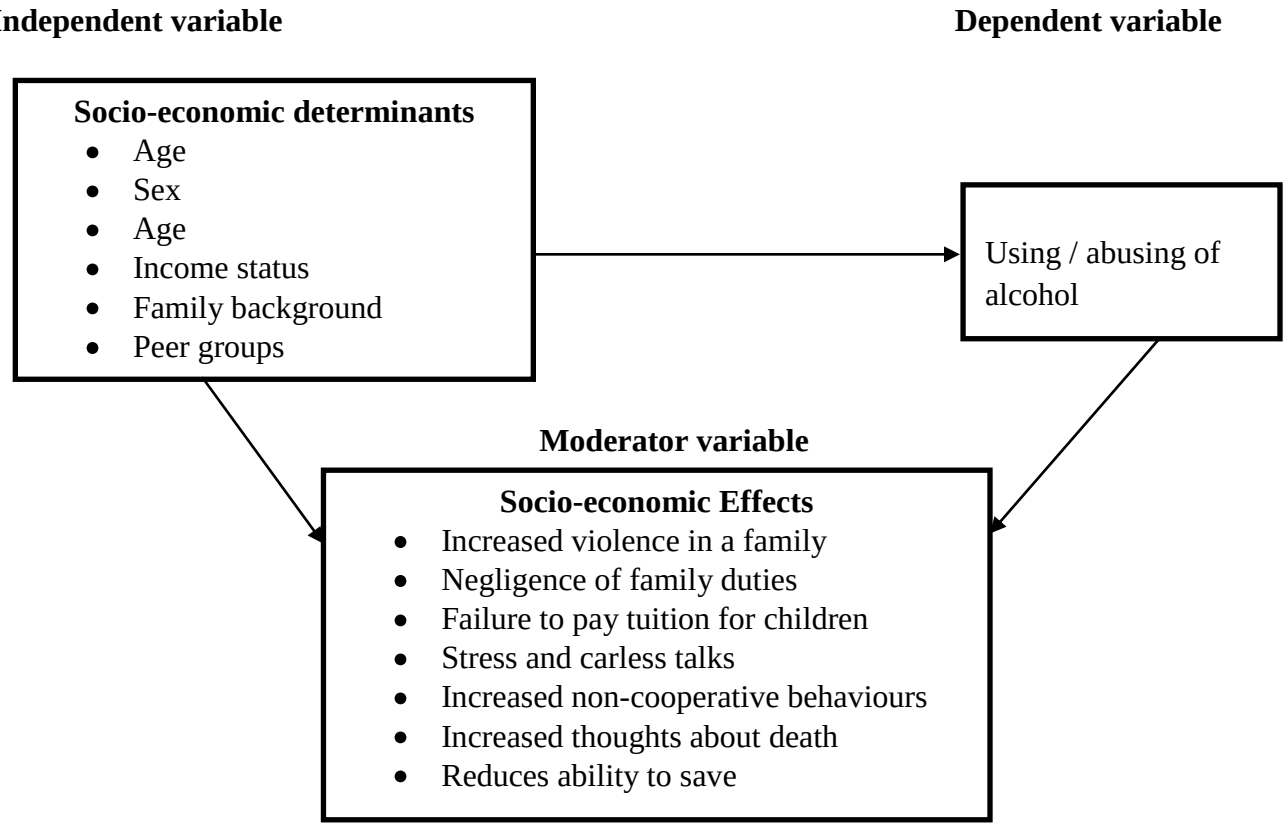


Figure 1.8.2: Conceptual framework for determinants and effects of use of Alcohol

The conceptual framework presented in figure 1.8.2 shows that the social economic factors (independent variable) determines the abuse or use of alcohol. Among the independent variables, there is age, sex, income of the people, family background and peer groups. These variables support the social learning theory that was used to guide the study. For example, within a group of peers, an individual is influenced to learn using or abusing the alcohol. The figure 1.8.2 also shows the social economic effects as moderating variables. It is the social economic effects that are normally related to the independent variables.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents the reviewed literature and other author's views regarding the use of alcohol among PLHIV. The section begins with the socio-economic determinant of alcohol abuse and ends with the social economic effects of alcohol abuse among people living with HIV.

2.1 Socio-economic determinants of alcohol use

Society and culture can influence a person's drinking in terms of the frequency and quantity levels of the alcohol consumed per each drinking occasion. Socio-cultural factors are those reasons that people advance for drinking alcohol which are considered as socially and culturally acceptable and seen to be normal for a person to consume alcohol (Crutzen*et al*., 2012). It should be noted that societies and cultures are not homogenous and they widely differ in several ways including their perceptions, attitudes, beliefs and practices regarding what should be the acceptable alcohol (Crutzen*et al*., 2012).

This implies that, each society tends to create a macro environment that either positively or negatively influences the alcohol drinking patterns of its people. Through, formulation of the bylaws or other alcohol use regulatory measures that are aimed at fulfilling the societal expectations of either drink with no limitations or regulated drinking or not to drink (Robson, 2010). However, societies where such kind of alcohol use control measures do not exist and with high levels of alcohol drinking freedom people can take advantage of the situation and consume alcohol uncontrolled and excessive regardless of their HIV status. In the Ugandan situation, laws upon the PLHIV have never been passed apart from increased awareness towards and efforts to

protect and promote the rights of PLHIV. Upon this situation, different tribal groups in Uganda have different beliefs towards alcohol and cultural values.

In addition, the society setting in terms of availability and accessibility of alcohol in the proximity physical setting where a person lives can determine a person's decision whether to use alcohol or not (MacDonald *et al.,* 2010). For example, if a person who has been using alcohol relocates to different areas where alcohol is not available and accessible coupled with non-convivial atmosphere for using alcohol, he/she is likely not to abuse or use it. On the contrary, if a person lives in a physical setting where alcohol use is common and is easily available and accessible with peers, this can motivate people living in that locality to abuse alcohol. Although this information has been presented by scholars such as MacDonald *et al.,* (2010), these have not been tested on the population in Kasese District, Western Uganda. It was upon this perspective that this study was set to establish how availability and accessibility of alcohol determine abuse of alcohol by PLHIV in Kasese District.

Bryden et al., (2013) in their study found that the socio-economic determinants for example neighborhood deprivation, poverty, income levels, and unemployment were associated with alcohol use. However, their analysis basically focused on area-level that indicated a protective effect of the level of community participation and involvement on the use of alcohol with adults living in higher-income areas reporting greater alcohol use compared to those living in low income areas. Secondly, their study basically focused on the people general and did not explore specific socio-economic determinants among PHLHIV including alcohol users and non-users, gap that this research intends to address.

Similarly, Patrick et al., 2012conducted a population-based survey- the Panel study of Income Dynamics in the United States of America and they revealed that the indicators of family background of their socioeconomic status including income, wealth, and parental education predicted alcohol use among young adults in the United States. They further noted that young adults with highest socioe-conomic status family background had greater alcohol use while those with greater family wealth Heavy Episodic Drinking (HED) prevalence (Patrick et al., 2012). However, these scholars underscored the influence that may be associated to other factors such as personal characteristics that may together determine alcohol use among young adults.

According to the study conducted by the Center for Disease Control and Prevention in the United States, revealed that people who had low levels of education especially below high school and with low income levels had the lowest prevalence of heavy episode consumption than People who had increased household incomes greater than $ 75,000 a year (CDC, 2012). However, the frequency and quantity consumed per occasion was much higher than those that were highly learned. This implies that the level of education influenced the prevalence of heavy consumption episode as well as determining factor for the frequency and quantity of alcohol consumed. These findings were further reaffirmed by Finch et al., (2013) where they stated that personal and household income were positively associated with alcohol use quantity and frequency of heavy consumption episode.

In Africa, the rate of alcohol consumption is not different from the rest of the world because alcohol is easily accessible to the youth to people of all levels and ages (Kabiru et al., 2010). An empirical review of literature has demonstrated that a substantial proportion of youth in Sub-

Saharan Africa have ever consumed alcohol or are currently consuming alcohol because it is accessible and they have little income to buy it (Freeman et al., 2006). In a study conducted in Uganda indicated that the country was having the highest annual consumption of pure alcohol in liters among the youth in the world (Kabwama et al., 2016). Also, Nzala et al. (2011) reported in their study that one out of every three Zambian adolescents were consuming or have ever consumed alcohol.

In another study conducted by Mbatia et al. (2009) on hazardous drinking and drug abuse in urban Tanzania among the people of 15-59 years of age, it has been found that both men and women who were employed, were household heads, and were between the ages of 25 to 34 reported hazardous drinking since they had greater access to money which enabled them to purchase alcohol. Ambale (2015) carried out a study on prevalence of substance abuse of alcohol between both men and Kenyan women primary care clinic patients, age range 18-25+, which found that being employed was cited as a reason for abuse since it made it possible for individuals to buy alcohol.

A study conducted in a high school in Western Kenya revealed that both young men and women indicated influence from friends, family (parents and siblings), and relatives (extended family) to use alcohol as one of the reasons they started drinking alcohol (Loke & Mak, 2013). Other young men and women in a public rural high school, mean age 16.8, stated that they were introduced to alcohol by their friends (both fellow students and out of school peers). A group of both young men and women high school students in Central Kenya indicated peer influence as a major factor in use and abuse of Alcohol.

Medeiros (2014) conducted a study among high school adolescent students in Seychelles, mean age 14, and found that young men whose parents did not know or rarely knew what they were doing reported abusing alcohol while young women whose parents did not know or rarely knew what they were doing reported alcohol abuse. A study on alcohol and drug abuse among urban slum adolescents in Nairobi, Kenya, age range 12-24, showed that young women who experienced marriage disruption (separated, divorced, or widowed) were more at risk than young men to abuse alcohol (Elizabeth, 2012).

2.1.2 People's personality, past experience and Alcohol use

People's personality characteristics influence their motivation to abuse alcohol or not to abuse because of their uniqueness (Simons *et al.,* 2011). In most cases, alcohol dependents do not learn from their past mistakes due to the effect that consumptions cause in their lives and their mutual interpersonal-relationships with families and colleagues characterized by negative emotions that push them to continue abusing alcohol (Bobova *et al.,* 2011). However, non- alcohol users can also inhibit similar personality. This study was therefore organized to establish if personality is a determinant factor to use alcohol among PLHIV in Kasese District. One of the models of the learning theory that has been used to guide this study is conditioning. Despite of personality as an influence to alcohol abuse, itself as a determinant factor to PLHIV is limited in Uganda.

In addition, the motivation for people to abuse alcohol especially when they are HIV positive can be determined by their past alcohol use experiences coupled with the surrounding environment. A combination of these factors work together to influence a person to abuse alcohol and their presence may increase the likelihood that a person will become alcohol dependent (Crutzen*et al*., 2012). This pre-exposes the persons in question to practice certain alcohol use patterns or refrain

from consuming alcohol in their personal lives (Simons, Carey, and Wills, 2011). Moreover, due to people's past alcohol use experiences, they become conditioned and develop a cognitive reaction to any alcohol stimuli and this can still drive them to abuse alcohol despite having been advised to stop it upon certain health risk factors that endanger their lives (Field and Duka, 2012). This is in line with the social learning theory that guided this study where the principle of Classical conditioning applies, meaning that a specific stimulus caused a specific response in this context.

Similarly, people's desire to enhance experience, cope with negative emotions and develop social relations can be determining factor to influence people to abuse alcohol. Each of these spheres of influence can be linked to certain alcohol use levels for example, heavier users or hazardous users are motivated to abuse alcohol in order to cope up with negative emotions and others could be abusing alcohol due to social pressure and competing demands to meet their family obligations (Elliott *et al.,* 2014). It was upon this perspective that this study was organized to establish the extent to which motivation determines the abuse of alcohol among the PLHIV in Kasese District. Besides, some people intentionally abuse alcohol to become drunk and be free of emotions faced in their everyday life (Shacham*et al.,* 2011). While studies on emotions have been carried out, evidence whether it determines alcohol abuse is limited in Uganda among the PLHIV. It was upon this basis that this study was set to establish whether people's emotions determines alcohol abuse among PLHIV in Kasese District.

More so, according to a study conducted on alcohol use motives among HIV Primary Care Patients in urban clinic environments in countries of Africa such as Cameroon, South Africa and Ethiopia, the alcohol use motives was found significantly associated with the number of alcohol consumption indicators that particularly included coping motive which was strongly and

consistently associated with more alcohol abuse and heavy consumption (Elliott *et al.,* 2014). In the same study, the social facilitation motive was associated with more frequent alcohol use to intoxication while social pressure motive was actually associated with consuming less and binge consumption less frequently. Moreover, the study participants reported consuming an average of 5.7 drinks per occasion, 3–4 times per week (Elliott *et al.,* 2014). As presented in relation to countries in Africa, the information about motives to alcohol abuse in Uganda among PLHIV is limited. It was for this reason among other reasons that this study was conducted from Kasese District.

On the other hand, certain changes in people's motives to abuse alcohol can affect their consumption levels. Scholars conducted a study among 2791 women with HIV who were alcohol users and observed the changes in their consumption patterns overtime. The proportion in each of the five distinct consumption trajectories where (3%) continued with heavy consumption, (4%) reduced from heavy to non-heavy consumption, (8%) increased from non-heavy to heavy consumption, (36%) continued as non-heavy consumption and (49%) continued as non-consumption. Many women changed their alcohol consumption patterns over time, the majority of women with HIV infection either continued to consume alcohol, but kept their alcohol consumption below heavy levels (Cook *et al.,* 2013). However, what was not clearly stated in this study was to whether the changes in alcohol consumption patterns were attributed to the changes in the motives to abuse alcohol or whether there were other contributing factors that were responsible for the changes that occurred at different levels. This gap in knowledge requires further investigation and the findings to this study as presented in chapter four attempts to provide some answers.

In addition, some scholars have advanced arguments that HIV women clients use alcohol. The determinants varied and they included: Biological, positive physical sensations, and consuming to relieve pain (Cook *et al.,* 2016). The same study indicated that several participants could not stop consuming alcohol once they started and this is related to the social learning theory. Some consume alcohol due to negative moods, depression, joyous celebrations, and some consume alcohol after knowing their HIV positive status in order to cope with the stress. Despite of such situation, the study did not identify how certain socio-economic relate to these variables. This leaves a gap to be bridged as one examines factors determining use of alcohol among PLHIV in Kasese District.

2.2 The socio-economic effects of alcohol

The historical time and individual-level factors, such as community context, family/peer influences and socio demographic features such as: gender, age, race, ethnicity, culture, religious affiliation, and socioeconomic status within various systems and levels, interact and transact over time to determine alcohol-related outcomes, such as drinking patterns and negative alcohol- related consequences for example traffic accidents, financial debts, and violence among others (Gruenewald et al., 2014).

In addition, a meta-analysis of cross-sectional studies conducted in 25 countries indicated that both men and women with less education levels reported negative alcohol-related consequences than their counterparts with higher education background even after controlling their drinking patterns (Grittner et al.,,2012). However, these studies were conducted among the general population and the investigators did not consider the socio-economic determinants of alcohol use among the PLHIV with special focus on both alcohol users and non-alcohol enrolled on ART, a gap that this study intends to address.

2.2.2 Alcohol and risky sexual behaviour.

Alcohol abuse can also lead the PLHIV practice risky sexual behaviors such as having multiple partners, engaging in unprotected sex, which pre-exposes them to re-infection or infecting new partners with HIV virus (Bajunirwe *et al.*, 2013). A similar study conducted in Jacksonville, Washington, DC and Chicago found that several women described how alcohol result in becoming involved in sexual activities that they did not intend, while others also acknowledged that alcohol affected their own personal sexual expectancies and desires (Cook *et al*., 2016). However, people still have multiple partners or engage in unprotected sex not necessary due to influence of alcohol use, but due to other factors like peer pressure, attitude and socio-cultural factors among others.

Across the globe, alcohol use has been implicated as a prominent risk factor in the transmission of HIV. Alcohol consumption increases an individual's risk by impairing sexual decision-making and by weakening the immune system. Baliunas *et al.,* (2010) found that HIV was associated with overall level of alcohol consumption. Alcohol users were at 77% higher risk of HIV infection than non-alcohol users. Moreover, risk of HIV infection among heavy episodic alcohol users doubles that of non-heavy episodic alcohol users. Another meta-analysis examining the association between alcohol use and HIV from studies conducted in Africa by Fisher *et al.,* (2011) found alcohol users' status to be associated with HIV infection such that alcohol users were 70% more likely to be HIV-positive than non-users. Again, risk of HIV was notably higher among problem alcohol users versus non-problem alcohol users.

Thus, alcohol use appears to increase the likelihood of becoming infected with HIV in dose-response fashion. All these studies concluded that an HIV/AIDS infected person can easily change decision to have sex with a non-infected person if the two are taking alcohol together.

This is because both people have been influenced by alcohol and they tend to be friends sharing the same environment. Basing on the Social learning-Theory's Operant conditioning principle, that guided this study, this occurs due to the cause-and-effect relationship between a behavior and its consequences. It is observed that alcohol affects the capacity to think positively and engaging in sexual affair with a HIV/AIDS person is possible and easy.

Alcohol use among people already infected with HIV is also associated with sexual risk behaviors. A meta-analysis of 27 studies examining the association between alcohol (any alcohol consumption, problematic drinking, and alcohol use before/during sex) and unprotected sex among people living with HIV/AIDS found a positive association between alcohol use and unprotected sex Shuper *et al*. (2009). These findings suggest that alcohol use is a significant risk factor for transmission among PLHIV since it influences decision making among people to practice un-protected sex. While this study explains the effects in relation to the people with opposite sex, it does not tell how alcohol influences the PLHIV expenditures to social services such as education, water bills and electricity.

2.2.3 Alcohol and decision making

Alcohol is associated with an increase in risk taking and impulsive decision making. However, given the nature of consumption, it is quite challenging to establish causal relationships between alcohol and many socio-economic behaviours and decisions. Many of the alcohol studies use survey data to compare behavior of people who abuse alcohol to those who do not. However, interpretation of these results has been difficult. Across the globe, social scientists have devoted effort in analyzing the relationship between alcohol consumption and risky behaviors in fields of investigation ranging from driving under the influence of alcohol, corresponding to traffic fatalities, to truancy and dropping from of high-school, from detrimental labor productivity and

labor market outcomes of young adults, to health problems, and from risky sexual behavior and to violent crimes. Most of these studies are based on survey data and provide useful indication about the social costs associated with alcohol abuse.

Corazzini *et al.,* (2014) carried out a study on the effect of alcohol on risk and humanity as well as optimism, time preferences, and willingness to pay in a controlled laboratory setting. Their study used three treatments to separate the pharmacological and psychological effects of alcohol. In their first experiment, no reference was made to alcohol. In the other experiment participants completed the same tasks as the benchmark, but here participants knew they could consume alcohol. In the second experiment half of the participants were given alcohol while the other half were given a non-alcoholic drink with alcohol smell. It was established that alcohol leads to irresponsible behaviours and memory loss that leads to failure of the tasks. Despite of the results, the scholars do not reveal how alcohol leads to memory failures and irresponsible behaviours. This study intends to provide this solution guided with the theoretical framework of this study.

Other studies have investigated the effects of alcohol consumption on basic economic decision making. Schilbach (2015) focuses on self-control using a field study and the extent to which consumption of alcohol can influence an individual in taking decisions about saving. The study found that alcohol consumption is related to lavish expenditure not only on alcohol but to other items. He finds that financial incentives can be used to discourage drinking which in turn leads to more willingness to save. The study did not however go beyond to apprehend the rate of savings (higher or lower) an important economic effect that need to be explored.

Galizzi and Miraldo (2012) carried out a study on the effects of alcohol consumption among the PLHIV and risk eversion. The findings show that PLHIV cannot evade risks since they have

been addicted or practice what is centrally to the society. Besides, PLHIV behave centrally to the society because some of the PLHIV believe that the community is against them. Despite this information, it was not concluded how the PLHIV behave as the community reacts. Besides, the study did not show how women react in relation to male counterpart. Burghart *et al.,* (2013) found that alcohol makes women more risk averse than men but their tolerance towards risks increase further than that of men.

Similarly, Bouchery et al., (2011) reported that people who consumed alcohol excessively had higher economic costs compared to moderate alcohol users. These high expenditures were mainly related to health care, motor vehicle accidents, criminal justice involvement and losses incurred in workplace productivity.

Cawley and Ruhm, (2012) reported that rational individuals would weigh the costs and benefits of certain health behaviour, and decided to participate only when the benefits exceeded the costs. However, individuals were unable to accurately estimate these costs and benefits without sufficient information. The investigators concluded that lack of information would result into risks of unhealthy behaviours lifestyle economic perspective that could be underestimated, thus, leading to frequent use of alcohol.

In addition, based on the cost-benefit analysis, individuals who were employed tended to face a lower cost of consuming alcohol than individuals who were unemployed because they were more financially independent. However, sometimes employed individuals may have a higher tendency to consume alcohol than unemployed individuals (Cawley and Ruhm, 2012).

Scholars conducted studies about the effects of alcohol use among people living with HIV enrolled for Antiretroviral treatment (ART) and found out that alcohol use is associated with

poor treatment adherence (Pacek *et al.,* 2014). Moreover, heavy alcohol abuse weakens a person's immune system through alcohol-induced malnutrition (Shuper *et al.,* 2010) and thus, a person becomes susceptible to opportunistic infection and this situation can easily lead to HIV disease progression (Baum *et al.,* 2010). Also, alcohol abuse is associated with poor quality of health, disease and societal dysfunction (Rehm, 2011).

Lee et al, (2013) reported that people who did not earn their high school diploma by age 21 were more than twice as likely to belong to the alcohol- and nicotine-dependence group and six times more likely to belong to the comorbid-symptoms group compared with those who had achieved a higher educational attainment. Also, People with greater alcohol and nicotine –dependence symptoms or comorbid symptomatology achieved lower wealth accumulation at the age of 30 compared with people with low overall symptoms experience (Lee et al., 2013).

Similarly, Richardon et al., (2013) conducted meta-analysis of 5 studies about the alcohol related outcome, the quantity and frequency of a person's alcohol use resulted into negative alcohol related effects. Alcohol use among people living with HIV enrolled for Antiretroviral treatment (ART) was associated with poor treatment adherence (Pacek *et al.,* 2014).

Majority of people living with HIV and who are alcohol users have developed alcohol use disorders and liver disease problems (Bruha, *et al.,* 2012). In the recent past, liver disease has emerged as one of the leading cause of morbidity and mortality especially among HIV positive people with a history of alcohol use (Antiretroviral Therapy Cohort Collaboration, 2010). Similarly, PLHIV who are co-infected with hepatitis are particularly more vulnerable to liver diseases and their hepatitis progresses much faster especially if they are alcohol users leading to increased rates of liver fibrosis and cirrhosis (Curry, 2013).

In addition, a cohort study conducted among frequent, moderate and non-drinker HIV clients to determine if there is association between alcohol use and increase in viral load. The study found out that frequent intake of alcohol is associated with accelerated progression of HIV disease (Baum, 2010) and higher viral load (Hahn & Samet, 2010). There could have been other confounding factors that could have influenced the outcome of the study for example metabolism and behavioral variables. Therefore, the association of alcohol use with higher viral load and HIV disease progression cannot be ignored, but it is worth noting that there could be other contributing factors too, that can lead to viral load increase especially among PLHIV who abuse alcohol and continue to have unprotected sex with HIV positive partners.

In a study by Neblett *et al.,* (2011) among PLHIV who are alcohol users revealed that alcohol consumption can greatly contribute to morbidity and mortality. Another study by Machtinger *et al.,* (2012) found that PLHIV and are non-hazardous users can reduce their survival by at least 1 year while those who consume five or more per day reduces their survival by 6 years. Similarly, alcohol use is also linked to violence, mental health conditions and symptoms, traumatic events or stressors, including a positive diagnosis of HIV (Devries *et al.,* 2014).

Furthermore, alcohol use among PLHIV has been associated to early death and sometimes the deceased leaves dependents with no financial and social support system in place. A cohort study among HIV-infected women found that heavy alcohol consumption was independently associated with earlier death (Neblett *et al*., 2011). However, the scholars could not simply conclude that early death was caused by alcohol use because there could have been other confounding factors for example, co-infections like hepatitis C or any other health condition that have equally contributed to early deaths in PLHIV, but not solely due to alcohol use. Secondly, there could have been some PLHIV who were not alcohol users, but still had early death. Since

the lifespan of an individual cannot accurately be predicted in spite of their HIV positive status , further studies are still needed to critically measure the extent to which alcohol use contributes to early death.

Conclusion

The literature reviewed shows that there are various determinants of use of alcohol among individuals which cuts across. It shows that the social-economic and cultural factors influence the use of alcohol in various ways. For example, in a family where parents use alcohol, there is high percentage among the children to inherit the practice. In Kasese District where alcohol is regarded a cultural drink, research about such factors have been missing this research however has bridged the gap.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter describes in details the methods that were employed during the study. It starts with the research design, the study area, population and sample size, methods of data collection and how data was analyzed.

3.1 Study design

This study design is a descriptive cross-sectional study that employed quantitative methods of data collection. Cross-sectional survey can be used to establish the cause and effect relationship of different variables without experimental manipulation. Under this survey, the study established the socio-economic determinants for the abuse of alcohol among people living with HIV in Kasese District. The study also established the socio-economic effects of alcohol abuse on the PLHIV

Additionally, cross sectional survey design was used because it helped the researcher to gather data from a sample of a large population at a specific time and the data collected can be used to make inference about the general population. Cross section survey design was also used having known that it can be carried out within a short period of time and this was done in one year research leading the findings as presented in chapter four of this dissertation.

3.2 Study area

The study was conducted from Kasese District among clients receiving HIV care from four health centers, two from Bukonzo County and Kasese Municipality respectively. The four health centers included Kasanga Primary Health Centre III and Bwera Hospital which are found in

Bukonzo County; and Kasese Municipal health centre III and Kilembe Mines Hospital which are found in Kasese Municipality

Countrywide, Kasese District is well known for its high rate production of local alcohol that is commonly liked by indigenous Ugandans and it is normally sold locally in small and big bars and retail shops as well. Some families in Kasese still use local alcohol to express hospitality to the family members, friends and relatives. This local alcohol is one of the sources of income to some people in Kasese among the Bamba and Bakonjo respectively. It is normally exported to other areas of Uganda such as central and eastern districts, and the Democratic Republic of Congo. Bars, hotels and shops in Kasese also sell other forms of alcohol apart from the locally made. These include beers that are made from Uganda and others imported from abroad.

Additionally, Kasese district has one of the highest HIV prevalence rate of 8.2% compared to the National prevalence of 7.3% (UIAS, 2011) with Antenatal Clinic (ANC) prevalence stands at 4.7 % and an estimated 15,122 adults and 1,790 children less than 15 years living with HIV (PEPFAR Burden Report, 2015).

The fact that alcohol is an economic activity for both males and females, yet with different risk factors that leads to unprotected sex; HIV can easily spread. Kasese District was also chosen because it is one of the districts of Uganda with majority of people living with HIV (UBOS, 2014). In such circumstance, the researcher established the relationship between alcohol use and HIV / AIDS and the extent to which it can influence behaviours.

Kasese District is found in western Uganda bordering Kabarole District to the north, Kamwenge District to the east, Rubirizi District to the south, and the Democratic Republic of Congo (DRC) to the west. The district headquarters is named after the District's name and is located approximately 359 kilometres, by road, west of Kampala, Uganda's capital and largest city. The

district has a total land area of 2,724 square kilometres, of which 885 square kilometres is reserved for Queen Elizabeth National Park and 652 square kilometres for Rwenzori Mountains National Park, leaving 1,187 square kilometres for human habitation and economic utilization.

3.3 Study population

The study population was 8510 adult males and females with HIV in Kasese District (Kasanga Primary Health Centre III with 1986 PLHIV), Bwera Hospital with 2745 PLHIV, Kasese Municipal Health Centre III with 1647 PLHIV, and Kilembe Mines Hospital with 2132 PLHIV; with specific interest to those who were enrolled on the antiretroviral treatment (ART)

Although there were PLHIV but not on ART, the researcher thought that people on ART would be the best for this study. In order to reach to the PLHIV and were at the same time on ART, this study used the information from the health clinics where clients received ART from.

3.3.1 Study Unit of analysis

PLHIV that was enrolled to the antiretroviral treatment formed the unit of analysis. This was fairly divided into two (not and taking alcohol while on treatment).

3.4 Selection Criteria.

3.4.1 Inclusion

The inclusion criterion was PLHIV aged 18 years and above who were already enrolled for ART (including both alcohol and non-alcohol abusers) in last 12 months at any of the health facilities of Kasanga Primary Health Centre III, Bwera Hospital, Kasese Municipal Health Centre III and Kilembe Mines Hospital. These health centres were chosen because they have the highest numbers of people living with HIV enrolled in HIV care in Kasese District.

3.4.2 Exclusion

PLHIV who were not enrolled for ART at any of the four health facilities mentioned above were not eligible to participate in the study.

3.5 Sample size

A sample size of 405 respondents was interviewed and this was determined using slovan's formula (Ajay & Micah, 2014) as presented.

$$n = \frac{N}{1 + N(e)^2}$$

Whereby,

n = Number of samples

N = Total population

e = Error tolerance

$$n = \frac{8510}{1 + 8510(0.05)2} = \frac{8510}{21}$$

$$\cong = 405 \text{ respondents}$$

In order to reach the sample size per hospital or the health center, the researcher used the following formula.

$$n = \frac{number\ of\ total\ population\ in\ a\ health\ centre}{Total\ population}\ x\ 405$$

For Kasanga Primary Health Centre III with the total 1986 PLHIV clients.

$$\frac{1986}{8510}\ x\ 405$$

$$\cong = 95 \text{ Respondents}$$

Using the same formula, the researcher selected the number of the sample size per hospital / health centre as presented in 3.1 of this section.

3.5.1 Sampling techniques

Purposive sampling technique was used to select Bukonzo County and Kasese Municipality respectively and this was because they have the highest numbers of people living with HIV in Kasese District (UBOS, 2014). A multi-stage purposive sampling was used to select four hospitals / healthy centres in Kasese District (Kasanga Primary Health Centre III; Bwera hospital; Kasese Municipal Health Centre III and Kilembe Mines Hospital), in which four clusters were constructed. Four clusters were inclusive in nature with people with HIV using and not using alcohol. In order to determine the number of clients using or not using alcohol to be interviewed, the researcher used the already stated formula as;

$$n = \frac{number\ of\ total\ population\ in\ a\ health\ centre}{Total\ population}\ x\ 405$$

For Kasanga Primary Health Centre III, where 1986 were PLHIV; 1000 using alcohol while 986 do not; the researcher reached at the sample size as presented.

$$\frac{1000}{8510}\ x\ 405$$

$\cong = 48$ of respondents using alcohol and 47 not using alcohol

The table presenting the sampling process in each health center is presented in Table 3.1 of this section.

Table 3. 1 : Illustration of the sample size per Health Facility.

Health Facility	Total population of PLHIV	Sample size	PLHIV (using alcohol)	PLHIV (not using alcohol)
Kasanga Primary Health Centre III	1986	95	48	47
Bwera Hospital	2745	131	71	60
Kasese Municipal Health Centre III	1647	78	48	30
Kilembe Mines Hospital	2132	101	54	47
Total	8510	405	221	184

As presented in Table 3.1, the sample size was selected basing on clusters or health facilities. It was from the list of the people using and not using alcohol, which was provided from the hospital and Health Centres that a random sampling technique was used to select the number that was interviewed.

3.6 Methods of data collection

The researcher used both primary and secondary methods of data collection. The study was carried out using semi-structured questionnaires. Secondary data was sourced from review of medical and management records.

3.6.1 Primary method of data collection

The researcher used primary method of data collection in order to get firsthand information from the respondents. In order to get this information, instruments such as semi-structured questionnaires with the respondents was used.

Semi-structured Questionnaires

Ahuja (2001) defined a questionnaire as a set of questions usually sent by mail although at times delivered by hand. The hand delivery semi-structured questionnaires were used and the researcher used direct questioning since most of the respondents did not know how to write and some, to read as well. The study used questionnaire because they allowed respondents to give their information directly and accurately with limit from going a stray (Oso and Onen, 2008).

The Semi-structured questionnaires were used to collect primary data (Appendix II). It contained three parts; Part one covered the socio-demographic characteristics and parts two and three contained the Likert scale questions carefully constructed to capture all the necessary information from all categories of respondents in respect to the objectives of the study. A five point Likert scale with responses choices such as; (1) Strongly agree, (2) Agree (3) Not sure, (4) Disagree, (5) strongly Disagree was used. The Likert scale format has been widely used by different researchers and allows the respondent a variety of responses from which he/she can choose and makes it easy to tabulate the data obtained and they are very flexible and can be constructed more easily than most other types of attitude scales (Amin, 2005). Results from these findings are presented in chapter four of this dissertation. However, the Likert scale has a disadvantage that it gives the respondent a limited choice and hence does not allow the respondent to give reasons why he/she has taken that choice. It also some times may introduce bias since the respondent may simply 'tick' without any critical thinking. If the questions are not well formulated, they may be leading or enticing the respondent to offer certain answers. Little reasoning and in-depth understanding of the issue may be lost.

Remarkably, 405 questionnaires were distributed to respondents both consuming and not consuming alcohol and the response rate is presented in Table 3.2 of this section.

Table 3. 2 : Response rate of the respondents

Categories	Frequency	Percentage
Number of the questionnaires delivered	405	100
Number of the questionnaires returned	390	96
Number of that never returned	15	4

Table 3.2 shows that 405 (100%) questionnaires were distributed to respondents and 96% returned while 4% did not (in order to get enough information from respondents, the researcher first distributed the questionnaires and during returning the questions, some were administered directly). The researcher therefore used the information from 96% of the respondents to write this dissertation.

3.7 Quality Control

The data collection tools were pre-tested as mentioned earlier. All the semi-structured questionnaires were given a serial number at the time of data entry for future verification of the entries in case of need. The principal investigator also gave a brief explanation to every prospective respondent about the importance of answering all the questions and provision of accurate and clear data. The questionnaires filled were coded and entered into the SPSS programme on a daily basis. The principal investigator also sought the guidance of the academic supervisor for any technical issues that would arise in the process so that the highest quality of data and research report was produced.

Additionally, quality control was reached using validity and reliability of the instruments or tolls that were used to get primary data from the field.

3.7.1 Validity

Validity is the appropriateness and the extent how research instruments / tools measures what they are intended to measure (Oso and Onen, 2008). In order to establish the validity of instruments, the researcher administered 12 structured questionnaires at first to PLHIV, who were taking alcohol in Kampala. The exercise was used as a pilot study in order to establish the weaknesses of instruments; which were later collected and amended by the researcher. Having amended the instruments, Content Validity Index (CVI) for questionnaires was computed by first giving the instruments to two independent professional judges in the field of reproductive health who were masters' level holders, on a rating system of relevant and non-relevant.

Judges being two with two different scores, the scores were added up and divided by two in order to determine the highest rating scale. The researcher computed the Content Validity Index (CVI) by dividing the highest rating scale which was 11 by the total number of the questionnaires which was 12. The CVI was therefore 0.95. Amin (2005) asserted that for the instruments to be accepted as valid, the average index should be 0.7 or above and this was true as presented in Table 3.3. The same approach was followed to compute CVI for the interview guide (in-depth interviews) as presented in Table 3.4. The highest scale was five (5) and total numbers of the items were six (6). The ratio of the highest scale and the total number of items gives 0.83 . This figure is more than 0.7 recommended by Amin (*ibid*) as the threshold; hence the validity of the instruments is accepted.

Table 3.3: Content Validity Index for questionnaires

	R	NR	TOTAL
J1	12	1	23
J2	11	2	

Key

R=Relevant
NR=Not Relevant
J1=Judge one
J2=Judge Two

$$CVI = \frac{\text{Highest Rating Scale}}{\text{Total number of items in the questionnaire}}$$

$$= \frac{12+11}{2} = 11.5$$

$$= \frac{11.5}{12} = 0.9588333$$

=0.96

Table 3. 4 : Content Validity Index for the Interview Guide

	R	NR	TOTAL
J1	5	1	
J2	5	1	6

Key

R=Relevant
NR=Non-Relevant
JI=Judge One
J2=Judge Two

$$CVI = \frac{\text{Highest Rating Scale}}{\text{Total number of items in the instrument}}$$

$$= \frac{5+5}{2} = 5$$

$$= \frac{5}{6} = 0.82$$

3.7.2 Reliability of research instruments.

Reliability refers to the measure of the degree to which research instruments yields consistent results after repeated trials (Mugenda and Mugenda, 2003). Reliability has also been defined as the dependability or trustworthiness in the context of measuring the instrument. It is the degree to which the instrument consistently measures what it is measuring (Amin, 2005).

The study used research instruments whose reliability had been tested and found to conform to the acceptable standards as set by UMU and the FHS. In testing the reliability of instruments, the study adopted the test-re-test method which involved administering the same instruments twice to the same group of subjects and this was done by selecting an appropriate group of respondents, the researcher then administered instruments to respondents and then re-administered the same instruments to another group after a week and the results of the two periods were correlated to obtain the coefficient of reliability. If the coefficient was 0.6 and more, as recommended by Mugenda and Mugenda (2003), the instrument was considered reliable. All the possible sources of variations in interpretation of the study tools were removed and items concerned were re-organized to enlist similar interpretation and meaning among different respondents at different times.

3.8 Quantitative Data

Quantitative data was collected by use of a semi-structured questionnaire which was structured per the study objectives. The questionnaires were sorted and coded for ease of identification during the process of data entry into the SPSS computer programme. Questionnaires were checked for any errors and omissions before they were considered.

3.8.1 . Data Analysis.

Data collected was analyzed using the Statistical Package for Social Scientists (SPSS) version 16.0, which helped to summarize the coded data and produced the required statistics in the study. Data was entered, edited, cleaned and sorted. The data was presented in form of tables as presented in chapter four of this dissertation. Regression analysis of the determinants and effects of alcohol abuse was conducted. Data was then presented in relation to the objectives of the study as presented in proceeding chapter four.

3.9 Ethical considerations

After submitting the research proposal, an introductory letter was received from the university of Uganda Martyrs (Faculty of Health Sciences) introducing the researcher as a student carrying an academic study from Kasese District. The researcher then proceeded to the District Health Office (DHO) with the aim to obtain permission to carry out the study from the four sampled health facilities in the district.

Before the study, the researcher first requested for the informed consent from the participants and they were informed how their participation in the study was voluntary without pay. Participants were free to withdraw from the study at any point should they wish to do so. During the study, the researcher maintained confidentiality as one of the principle ethical considerations throughout the study. The researcher also maintained honest to the responses from respondents and this was made to have trusted results of the study.

3.10 Limitations of the study

The data collection technique was mainly the use of semi-structured questionnaires which were used to obtain data from the respondents. There were chances that some respondents were initially un willing to respond to the all questionnaires.

Secondly, some of the PLHIV who were not using alcohol had little knowledge about the influence of alcohol on decision making and behaviours of those with HIV using alcohol. The researcher therefore largely depended on the respondents that were using alcohol so as to have complete research findings as presented in chapter four of this dissertation.

CHAPTER FOUR

RESULTS AND ANALYSIS

4.0 Introduction

This chapter presents the study findings, analysis and interpretation on the socio-economic determinants of alcohol abuse and its effects among PLHIV in Kasese District. The findings are presented basing on the objectives of the study; starting with the demographic information of the respondents, the socio-economic determinants to abuse alcohol and effects among PLHIV.

4.1 Demographic overview

Table 4. 1 One sample t-test for demographic variables

Variables	N	Mean	Std. Deviation	Std. Error Mean
Sex	405	1.3778	.48543	.02412
Age groups	405	2.4765	.86606	.04304
Level of education	405	2.3111	.83961	.04172
Religious education	405	2.3630	1.04081	.05172
Marital status	405	1.8840	1.01419	.05040
Nature of Residence	405	1.6469	.47852	.02378
Employment status	405	1.7333	.44276	.02200
Monthly income	405	2.4148	.70062	.03481

Table 4.1 shows the mean, standard deviation and standard error mean. This was intended to show the precision or random error during this study. The standard deviations presented are less to the mean but close to its value. Therefore, there was less deviation in random selection by the researcher and a justification of a good precision to the findings.

Table 4.2 Significance of demographic variable to the abuse of alcohol

	Test Value = 8		
	T	Df	Sig. (2-tailed)
Sex	-274.539	404	.000
Age groups	-128.348	404	.000
Level of education	-136.356	404	.000
Religious education	-108.995	404	.000
Marital status	-121.361	404	.000
Nature of Residence	-267.185	404	.000
Employment status	-284.834	404	.000
Monthly income	-160.429	404	.000

Table 4.1.1 also shows that all the demographic variables presented were significant to the abuse of alcohol to the people living with HIV. This is indicated by a sign of .000 of the eight variables which were tested using a one sample t-test.

4.2 The socio-economic determinants of abuse of alcohol among PLHIV

One of the objectives of this study was to examine the socio-economic determinants for the use of alcohol among the PLHIV in Kasese District. Some of the determinants are presented in Table 4.3 in percentages of this section.

Table 4.3: Socio-economic determinants of the abuse of alcohol among PLHIV

Determinants	Strongly agree (%)	Agree (%)	Not sure (%)	Disagree (%)	Strongly disagree (%)
Age	21.7	53.8	19.8	4.7	0
Using alcohol is learnt	32.6	58.0	7.9	1.5	0
Monthly income	17.5	56.5	19.5	6.5	0
Occupation	23.2	53.1	15.8	7.9	0
Income levels of a person	20.0	72.4	4.9	2.2	0.5
Sex	22.7	72.3	3.5	1.5	0
Peer groups pressure	12.8	82.5	4.0	0.7	0
Stress	55.8	23.5	15.6	4.6	0.5
Families brewing alcohol	13.6	77.5	7.7	1.2	0
Environment where an individual lives	79.0	17.5	3.5	0	0

Table 4.3 presents percentages of the determinants to abuse of alcohol among the PLHIV. One of the determinants presented is the environment where an individual lives determines the abuse of alcohol and 79% strongly agreed , 17.5% agreed and 3.5% were not sure.

The study established that the environment where one lives does not only influence PLHIV to abuse alcohol alone; rather it happens alongside with other determinants as discussed in proceeding section of this chapter.

The additional social determinant for the abuse of alcohol is the peer group pressure and 82.5% of the respondents agreed; 12.8 strongly agreed and 4% were not sure. It was established that

people within the same peer groups especially the youth believe that when one uses alcohol he or she is easily accepted into the social circles of friendship. This is in conformity with the social learning theory where it stipulates that social groups such peers can influence a person to consume alcohol. This however was not the case among individuals on ART who were not using alcohol; 0.7 % who noted that their social circle is built by remembering each other to take medicine.

Also, age was another social determinant of alcohol abuse and 53.8 % of the respondents agreed that age determines the abuse of alcohol, 19.8 % were not sure and 4.7 % disagreed with the statement. It was mentioned that age factor commonly among the youth enticed by the peers to abuse alcohol was also associated to having unprotected sex. In addition, the youth respondents said that they learn to take more alcohol to entice others from the opposite sex, which ends into unprotected sex. It is upon this that the social learning theory which was used to guide this study is found significant.

Taking alcohol among PLHIV is learnt and 58% of the respondents agreed; 7.9 % were not sure and 1.5 % disagreed. It was established that PLHIV who consume alcohol learn to use alcohol through their socialization with their families and peers especially to those families that have been traditionally known of brewing and selling alcohol. Similarly, families that brew local alcohol determine the abuse of alcohol where 77.5% of the respondents agreed with the statement. This implies that families that brew alcohol influence individual member to abuse alcohol whether enrolled on ART or not. Meeting society's expectations and fulfilling cultural values (for example drinking local beers during traditional marriages ceremonies) motivate PLHIV to use alcohol despite having been educated about its dangers while on ART.

Respondents added that some PLHIV use imported alcohol such Vodka, Tyson, Waragi, Chef, Nile beer, Club beer, Tusker, Guiness, Eagle and Senator. The researcher found that taking alcohol among the youth is learnt and failure to control themselves leads into dire social consequences as presented in the proceeding section of chapter four. Some PLHIV and enrolled on ART noted that alcohol taken by the youth is packed in small bags by different companies.

Besides, 55.8 % of the respondents strongly agreed that stress influences PLHIV to use alcohol; 23.5 agreed, 15.6 % were not sure and 4.6 % disagreed. Some of the respondents noted that there are so many factors that normally stress them across all the age groups such as thoughts about death and their future life. According to respondents that were not using alcohol, such thoughts normally come to individuals especially who have not received proper counseling. Some of the counseling services offered did not create an attitude of positive living in the minds of the HIV clients. It instead left them with a negative mindset where they believed that their status had made their lifespan shorter so they had to celebrate and enjoy all the 'good things of life' before they died.

In terms of economic determinants, 72.4 % of the respondents agreed that monthly income determines alcohol abuse, 20.0 % strongly agreed while 53.1% agreed that occupation also determined alcohol abuse among the PLHIV, 23.2 strongly agreed, 15.8 percentages were not sure and 7.9 disagreed. Implying that respondents who earn monthly and with an occupation can easily afford to buy alcohol on regular despite of their health status.

Table 4. 4 : A regression analysis of socio-economic determinants of abusing alcohol

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.908	.178		10.749	.000
	Age	-.089	.031	-.134	-248	.003
	Taking alcohol is leant	.073	.040	.095	1.837	.067
	Monthly income	-.089	.031	-.139	-2.875	.004
	Occupation	.068	.030	.114	2.267	.024
	Income levels	-.093	.038	-.114	-2.421	.016
	Families that brew alcohol	-.171	.056	.150	3.034	.002
	Peer group pressure	-.239	.047	-.260	-5.031	.000
	Stress	.006	.027	.011	.213	.831
	The environment where individual live	-.132	.032	-.205	-4.170	.000

From Table 4.4, it is shown that the environment where individuals live with a significance of .000; and peer group pressure with a significance of .000 were the major determinants of alcohol

abuse. Families that brew alcohol had a significance of .002, age with a significance of .003 and monthly income with a significance of .004 was also found major determinants.

4.3 The socio-economic effects of alcohol use among P HIV

The second objective was to identify the socio-economic effects of using alcohol on PLHIV and the findings are presented in Table 4.5 of this section.

Table 4.5 : Socio-economic effects of alcohol abuse among PLHIV

Effects of alcohol abuse	Strongly agree (%)	Agree (%)	Not sure (%)	Disagree (%)	Strongly disagree (%)
Increases risks for the spread of HIV	46.9	53.1	0	0	0
Increases death rate in PLHIV	25.4	74.6	0	0	0
Makes PLHIV not to take ARV drugs	26.9	73.1	0	0	0
Increases poverty among PLHIV	20.5	65.4	9.9	3.7	.5
Increases accidents on roads	12.3	59.8	24.2	3.5	.2
Increased family neglect	34.8	65.2	0	0	0

Table 4.5 shows the findings that alcohol abuse increases the spread of HIV and 53.1% of the respondents agreed; 46.9% strongly agreed. This implies that PLHIV starts to practice unprotected sex due to the influence of alcohol thus, causing further re-infection and spreading the virus to their individual sexual partners.

Also, the finding shows that alcohol increases death rate among the PLHIV and 74.6% of the respondents agreed; and 25.4% strongly agreed. Additionally, table 4.7 show other effects of alcohol among the people living with HIV on the ART and these include the influence not to

take ARV drugs and 73.1% of the respondents agreed; and 26.9% strongly agreed. Respondents revealed that alcohol grossly compromises the immune system among users. This eventually gives the virus an opportunity to multiply quickly in the body leading to higher viral load and decreasing the CD4 count hence weakening the immune system with related opportunistic infections that leads to early death.

More so, 65.4% of the respondents agreed that alcohol increases poverty among PLHIV leaving them with nothing, but debts. 20.5% strongly agreed 9.9% not sure and 3.7% disagreed. They further explained that at times alcohol consumers sold off some of their properties or assets so as to earn money to pay for such bill. This type of situation left many with no savings, but a lot of unpaid bills and empty bank accounts. Yet, this money which was used to buy alcohol could have been used to pay for other family needs including school fees for their children. This in the end affected their financial status and that of their families considering that most of them were bread winners to their families.

At least 59.8 % of the respondents agreed that alcohol abuse causes negative effects such as road accidents. 12.3% strongly agreed, 24.2% were not sure and 3.5 % disagreed. These respondents mentioned that, alcohol when consumed blurred alcohol abusers' sight and negatively influenced their thinking or at times they slept off from the steering wheel. This endangered not only themselves but also the people they were travelling with. This had at worst led to loss of lives and even created permanent injuries or disability to some of the PLHIV. Additionally, 53.1 % of the respondents further stated that, alcohol strains the body of alcohol abusers from functioning effectively and normally reduces the effective work of the body organs such as the human liver.

Table 4.6 :Log it regression of effects of alcohol among PLHIV

	Parameter	Estimate	Std. Error	Z	Sig.
LOGIT[a]	Increases risks for HIV spread	.739	.141	5.238	.000
	Influences PLHIV not to cater for their families	.280	.142	1.972	0.49
	Increase poverty among PLHIV	.515	.144	3.579	.000
	Increases accidents on the road among PLHIV	.433	.124	3.483	.000
	Increases family neglect among PLHIV	-.556	.159	-3.505	.000
	Intercept	-1.806	.749	-2.412	.016

The findings in Table 4.6 show that alcohol abuse's implications among PLHIV are severe. Alcohol abuse increases the risk for the spread of HIV, increases poverty among PLHIV and increases accidents on roads were all significant with .000, which are less to the value of alpha (0.05)

Table 4. 7: Influence of Alcohol abuse on behaviours and decision making

Influence on behaviours	Strongly agree %	Agree %	Not sure %	Disagree %	Strongly disagree %
Increase violent nature among PLHIV	10.4	70.6	18.0	1.0	0
Makes PLHIV talkative	12.6	81.0	5.2	1.2	0
Makes PLHIV interested in fighting	8.4	47.9	19.8	18.0	5.9
Makes PLHIV sexually active	5.2	20.2	29.1	36.1	9.4
Makes PLHIV to think poorly	4.2	15.8	33.8	37.5	8.6
Makes PLHIV non-cooperative	25.2	47.4	13.6	12.3	1.5
Makes PLHIV irresponsible	43.5	53.3	3.2	0	0
Makes PLHIV thoughtful about death	22.5	61.0	13.0	3.5	0
Makes men to undermine decisions of their wives	6.7	92.6	.7	0	0
Makes men with HIV to stop paying tuition	15.8	84.2	0	0	0
Makes PLHIV to save for future	3.0	25.2	51.1	20.7	0

One of the effects of alcohol among PLHIV in Kasese District has been violent behaviours and 70.6% of the respondents agreed and10.4% strongly agreed, 18.0% were not sure and 1.0% strongly disagreed. Such violent behaviours are expressed through fighting among PLHIV in their families and talkativeness.

Table 4.7 shows that alcohol influences PLHIV to be talkative, and 81.0% of the respondents agreed and 12.6% strongly agreed, 5.2% were not sure and 1.2% disagreed.

Additionally, the study established that alcohol has a negative effect on sexual behaviours and 20.2% of the respondents agreed with the statement and 5.2% strongly agreed, 29.1% were not sure;36.1%)disagreed and 9.4% strongly disagreed. The use of alcohol affect one's ability to make the right decisions especially when alcohol is taken in large quantities and some of these decisions are dangerous to a person and the people living with HIV. It was further stated that alcohol use expose people to risky sexual behavior because it increase their sexual desires and as a result, leads into having unprotected sex with multiple partners. This exposes them to re-infection and infection of new partners with HIV.

The study also shows that people on the ART who use alcohol are irresponsible to take care of their families as justified by 53.3% who agreed and 43.5% that strongly agreed. This is yet another socio-economic effect of alcohol among PLHIV. It was only3.2% of the respondents that was not sure; the number in agreement shows that people who abuse alcohol become irresponsible but this was not the case to none alcohol abusers.

The study also established that alcohol affects decision making among PLHIV. One of the decisions was the influence to listen to their wives or agreement as couples. Table 4.9 shows that 92.6% of the respondents agreed 6.7% strongly agreed that alcohol affects men from deciding with their women on issues of the family. Such responses show the negative influence of alcohol at the family level among the PLHIV.

It was also found that alcohol influences decision making to save among the people on ART. The researcher found that 40% of the respondents agreed with the statement, 58% was not sure and

2% disagreed. Such findings show that alcohol influences persons negatively despite the persistent use.

A regression analysis was run in order to determine the significance to which alcohol influence behaviour and the findings are presented in Table 4.8.

Table 4. 8: A regression analysis of socio-economic effects of alcohol on behaviour

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.025	.291		6.966	.000
	Makes PLHIV violent	-.155	.040	-.174	-3.819	.000
	Makes PLHIV talkative	.127	.049	.121	2.579	.010
	Makes PLHIV interested in fighting	-.097	.024	-.206	-4.013	.000
	Makes PLHIV sexually active	-.179	.025	-.376	-7.289	.000
	PLHIV cannot think well	-.046	.024	-.091	-1.898	.058
	Makes PLHIV thoughtful about death	-.060	.033	-.085	-1.812	.071
	Makes men to undermine decisions from their women	.307	.089	.164	3.458	.001

As presented in Table 4.8, it can be interpreted that the effect of alcohol on behavior among people with HIV are real. For example, it is evident that alcohol makes PLHIV violent (sig.000), talkative (.010) and interested in fighting (.000). The researcher therefore found that alcohol influences behaviours among the PLHIV.

Other effects of alcohol among the people on ART include increasing dangers for the spread of HIV and death rates, reluctance to take the drugs among others as presented in Table 4.8.

4.9. Summary of the key findings;

In summary, the major significant socio-economic determinants of abuse of alcohol among the PLHIV in Kasese District were associated with the environment where individuals lives with a significance of 000; and peer group pressure with a significance of 000. Families that brew alcohol with a significance of .002, age with a significance of .003 and monthly income with a significance of .004 were also found major determinants.

The socio-economic effects of alcohol abuse among PLHIV are severe; Alcohol abuse increases the risk for the spread of HIV (sig .000), increases poverty among PLHIV (sig .000) and increases accidents on roads (sig .000) were all significant with .000, which are less to the value of alpha (0.05)

CHAPTER FIVE

DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

The chapter presents the discussions, conclusion and recommendations of the study. All these eventually responded to the research questions and identified the gaps that needed to be addressed and gave recommendations for future improvement of the services.

5.1 Discussion of the key findings.

5.1.1 The socio-economic determinants to use of alcohol

The study established various socio-economic determinants that influence PLHIV in Kasese to use alcohol. The major determinants that this study found included the environment where one lives, pear-group pressure, age and monthly income levels determined the abuse of alcohol among the PLHIV in Kasese District. For example, it was found that PLHIV in Kasese use alcohol due to the influence of peer groups that cut across generations especially the youth. These findings concur with Elliott et al (2014) who stated that social peer pressure and socialization motives were associated with frequent drinking of alcohol among adult HIV clients. Besides, these determinants were found influencing people to drink alcohol by scholars such as Hasin and Katz (2010), and Crutzen et al, (2012) in relation to social learning theory that guided this study. The scholars observed that various groups in different areas are influenced to use alcohol basing on their state of life. It is upon this perspective that this study calls for the interventions such as targeting the young people that focus on education, social and peer resistance skills, normative feedback, or development of behavioral norms.

Additionally, in the context of Kasese District, it has been found that 72.3% of the respondents agreed that families that brew local alcohol determine the abuse of alcohol and people use alcohol as one of the traditional drinks. The findings concur with Scholars such as Crutzen *et al*, (2012) who noted that although there are environmental factors that influence persons to use alcohol, the socio-economic determinants are very important in comparison to others. Among these include the social settings of the families and sex of the individual persons and these determinants are in line with social learning theory that guided this study which stipulates social groups including families that can determine alcohol use in a certain group population.

The findings show that taking alcohol among people is not tradition; rather it is learnt. Since learning has no limit, it means that from the age of 18 years and above an individual can learn to use alcohol. The finding concurs with MacDonald *et al*, (2010) where they stated that if a person consuming alcohol relocates to a place where alcohol is not used; he can easily stop the practice. They also noted that if a person relates to a group of people consuming alcohol, such a person has more chances of learning to consume alcohol. This complies with the learning theory that guided this study. Supporters of the learning theory believe that use of alcohol is learnt and the learner is motivated by the existing behaviours, norms and perceptions towards alcohol among the people in a certain place (Horvath *et al*, 2014) . The theory further stress that using alcohol is influenced by positive attitudes, lower levels of confidence to the self and stronger beliefs to the existence of people that live as they engage in risky behaviours.

5.1.2 Socio-economic effects of alcohol use among PLHIV

Effects on behaviour and decision making

The findings indicated that alcohol increases poverty among PLHIV leaving them with a lot of financial burdens or debts. These results agree with the study conducted by Schilbach (2015) who found that alcohol limits persons from making savings as it encourages lavish expenditure on drinking any form of alcohol depending on the preferences of individuals. He also noted that similar method (financial incentives) can be used to influence an individual to stop taking alcohol. The findings also established that the monthly incomes determine the alcohol abuse and this financial stability can increase the rate of taking alcohol rather than stopping it. In relation to the social learning theory, where (Horvath *et al,* 2014) remarked that once an individual has been addicted to use of substances such as alcohol, the person finds it impossible to reverse the trend and gets addicted. Additionally, West and Brown (2013) noted that alcohol use later leads to pathological change in brain with urges that are uncontrollable. With such urges, the study researcher found that it is impossible for PLHIV to stop using alcohol using financial incentives such as money.

The study also revealed that alcohol abuse by PLHIV can influence their behaviours such as being violence at home, fighting and unnecessarily becomes talkative. This concurs with (Devries *et al.* 2014) were they revealed that alcohol use is also linked to violence behaviours, mental health conditions among people living with HIV. Further still alcohol abusers especially men can become irresponsible and influence them to bar constructive advice from their wives, yet families are based on decision making and listening to each other. Such behaviours are learnt from different groups of people using alcohol. Naturally, man is peaceful and ever respectful; violent behaviours are therefore learnt in accordance to the learning theory. Horvath *et al.* (2014)

noted that alcohol is a learned behaviours and it has other resulting behaviours. The scholars noted that alcohol is motivated by various factors within the environment such as norms and perceived control behaviours. In fact, it is due to desires to control perceived behaviours that are seen among people that influence some of the PLHIV to use alcohol. In the long run, they become addicted as explained by the social learning theory. The structure of the minds and its functioning become affected. This explains their violent nature and fighting behaviours as established by this study.

The findings further revealed that PLHIV who abuse alcohol practice risky sexual behaviors due to the influence of alcohol because it increases their sexual desires and thus, leads into having unprotected sex with multiple partners. The researcher therefore related decision making and behaviours among the people on ART in Kasese District to the findings of the study by Baliunas *et al.* (2010) where it was established that alcohol impairs sexual decisions. Negative behaviours and decision making were associated with PLHIV and taking alcohol as well Baliunas *et al.* (2010). The findings reveal that in case a PLHIV starts consuming alcohol, there must be loss of sense and sometimes he /she can have sex with any person at any time and in most cases practice unprotected sex, which is risky practice to spread HIV to other people within the same environment. This argument is in line with operant conditioning of the social learning theory used to guide this study.

The study found that alcohol abuse is associated with different issues such as road accidents and refusal to take the ARVs. This according to Pacek *et al,* (2014) alcohol makes an individual lose the sense of understanding. They also noted that alcohol has been associated with weakening immunity against other diseases and this was in agreement with Shuper *et al,* (2010) who related alcohol to induced malnutrition. The study further found that when immunity weakens, an

individual becomes susceptible to other disease, and the importance of Antiretroviral becomes useless.

5.2 Conclusions.

From the results and analysis, this study concludes that the environment where one lives, peer group pressure, age and monthly income are the major determinates to alcohol abuse among PLHIV in Kasese District. In Kasese District, these determinants are accelerated by various households and individual persons that prepare local alcohol which is taken in different social functions. Alcohol influences behaviours of people living with or without HIV.

With regards to the socio-economic effects of alcohol use, the researcher concluded that alcohol abuse increases the risk for the spread of HIV , increases poverty among PLHIV and increases accidents on roads were all significant with .000 less than the value of alpha (0.05). Also, Alcohol influence behaviours negatively rather positively! They involve in violent acts such as fighting and talking different issues which are not vital to different groups. Alcohol abuse among PLHIV affects their behaviors and decision making which leads them to get involved in road accidents, violent acts such as fighting and talking different issues which are not useful to their state of health, practice unprotected sex with multiple partners.

5.3 Recommendations to Local Government.

- The Local Government should come up with effective interventions strategies to address social determinant forexample violence associated with alcohol use, as well as enhancing protective factors at the community, family, individual and peer levels.
- Local Government should restrict the overall availability of alcohol via production, importation, advertising, distribution and pricing leading to increase in prices that will translate to decrease in alcohol consumption levels by people living with HIV.
- Kasese Local government should pass bylaws to regulate the hours during which alcohol is sold and this can lead to less alcohol-related harm, including rates of homicide and assault.
- Government Policy makers should consider the socio-economic determinants, by ensuring that their work explicitly addresses policy implications and practicalities, and it should be effectively disseminated to ensure that the necessary information is available and in an appropriate format to guide political decisions in regulating alcohol use and production. The socio-economic determinants of health could be taken into account during policy target setting, development and evaluation.
- Kasese district local government leaders and officials should establish youth friendly recreation centers in the respective sub-districts. This will help the people living with HIV especially the youth to improve on their health literacy and at the same time develop and improve their skills and talents that can help them to live a healthier life.

Recommendations to health workers.

- There is a need to form or strengthen different social support groups in Kasese district targeting proper life skills and appropriate decision making. These groups should be mandated to focus onto the people using alcohol in their lives and social lives.
- Health workers should intensify public health media campaigns aimed at reducing alcohol consumption in general and specific alcohol-related harms in particular. These media campaigns may also result in substantial savings in medical costs, property damage and productivity.
- Health workers should promote the implementation of programs targeting the young people that focus on education, social and peer resistance skills, normative feedback, or development of behavioral norms. Alcohol education programmes should focus on providing evidence based update and accurate information by use of interactive teaching and learning styles.
- Health workers should conduct proper counseling to the PLHIV for them to understand the dangers of using alcohol while they are enrolled on ART and make informed decisions.
- Health workers should incorporate intervention strategies during project design, implementation and evaluation that address these socio-economic determinants of alcohol use.

Recommendations to Community and Cultural leaders.

- The community and cultural leaders should also educate PLHIV about the positive attributes an individual acquire from using the traditional porridge or juice than the use of alcohol. It is hoped that with the involvement of the cultural and community leaders in sensitizing the masses and PLHIV in particular, will develop a positive attitude to alternative drinks than insisting on alcohol.
- Community leaders should promote social participation to encompass factors such as supportive relationships, involvement in community activities and civic engagement in order to reduce or protect against risky alcohol consumption.
- Community leaders should encourage youth involvement in sporting activities that influence on their health behaviours. They should implement multiple strategies that reduce supply, demand and related harm of alcohol.

5.4 Recommendations for future study.

- It is recommended to conduct future study on the alcohol consumption levels among the people living with HIV in Kasese and how each level affects their health status .

References

Ajay, S., & Micah, B. 2014. Sampling Techniques & Determination Of Sample Size in Applied

Andreoni M, Giacometti A, Maida I, Meraviglia P, Ripamonti D, Sarmati L. 2012 . HIV-HCV co-infection: epidemiology, pathogenesis and therapeutic implications. *Eur Rev Med Pharmacol Sci*. 16(11):1473–1483. PubMed PMID: 23111959.

Antoine J., Didier k, Jules B, Maiga A, Eugène M, Hamar A, Marcel D. 2010. Alcohol use and non-adherence to antiretroviral therapy in HIV-infected patients in West Africa. *HHS Public access: Addiction*. 105(8): 1416–1421. doi:10.1111/j.1360-0443.2010.02978.

Bajunirwe Bangsberg D, Sethi A 2013. Alcohol use and HIV sero status of partners predict high-risk sexual behaviours among the patients receiving antiretroviral therapy in south western Uganda.

Baliunas, D., Rehm, J., Irving, H., &Shuper, P. 2010. Alcohol Consumption and risk of incident human immunodeficiency virus infection: a meta-analysis. *International Journal of Public Health*, 55(3), 159-166.

Baum.M.K, Rafie.C, Lai .S,Sales.S, Bryan.J, and Campa. A., 2010. Alcohol Use Accelerates HIV Disease Progression. *AIDS research and human retroviruses journal*. Volume 26, Number 5. DOI: 10.1089=aid.2009.0211

Betholet Nicolas, Debbie M.Cheng, Jeffrey H. Samet, Emily Quinn, Richard Saltz 2010. Alcohol consumption patterns in HIV infected adults with alcohol problems.

Bryden, A., Roberts B., Petticrew, M ; and McKee, M. 2013, A systematic review of the influence of the community level social factors on alcohol use. PMID: 23454663

Centers for Disease Control and Prevention, 2010. Vital signs: Binge drinking prevalence, frequency, and intensity among adults in United States. Morbidity and Mortality Weekly Report 61(1):14–19. PMID: 22237031

Collins, S. E., Witkiewitz, K., & Larimer, M. E. 2011.The theory of planned behaviour as a predictor of growth in risky college drinking; *Journal of Studies on Alcohol and Drugs*, 72(2), 322. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3052901/

Cook .R.L,Cook. C.L, Karki M, Weber K.M, Thoma K.A , Loy C.M, Goparaju. L and Williams B.R, 2016. Perceived benefits and negative consequences of alcohol consumption in women living with HIV: a qualitative study. *BMC Public Health* : 16:263: DOI 10.1186/s12889-016-2928-x

Curry MP, 2013. HIV and hepatitis C virus: Special Concerns for patients with cirrhosis. *J Infect Dis. 207(Suppl 1*):S40–S44. PubMed PMID: 23390304.

DeLorenze G N, Weisner C, Tsai AL, Satre DD, Quesenberry CP Jr 2011. Excess mortality among HIV infected patients diagnosed with substance use dependence or abuse receiving care in a fully integrated medical care program;*Alcoholism, clinical and experimental research*, 35(2): 203–210. PubMed PMID: 21058961. Pubmed Central PMCID: 3242701

Devries KM, Child JC, Bacchus LJ, Mak J, Falder G, Graham K,2014. Intimate partner violence victimization and alcohol consumption in women: a systematic review and meta-analysis. *Addiction*.;109:379–91

Dual, Diagnosis. 2014. *The disease theory of alcoholism*. http://www.dualdiagnosis.org/alcohol-addiction/disease-theory-alcoholism, accessed on 05, February 2017.

Elliott, J. C., Aharonovich, E., O'Leary, A., Wainberg, M., Hasin, D. 2014. Reasons for limiting drinking in an HIV primary care sample.

Elliott, J.C., Aharonovich, E., O'Leary, A., Wainberg, M., Hasin, D.,2014. Drinking motives among HIV care patients. *AIDS Behav*. 18(7): 1315–1323. doi:10.1007/s10461-013-0644-4.

Finch, K.A., Ramo, D.E., Delucchi, K.L. 2013. Subjective social status and substance use severity in a young adult sample. Psychology of Addictive Behaviors 27(3):901–908. PMID: 23915371

Fritz K, Morojele N, Kalichman S 2010. *Alcohol: the forgotten drug in HIV/AIDS*. Lancet. 376(9739):398–400. PubMed PMID: 20650516. Pubmed Central PMCID: 3015091.

Grittner, U., Kuntsche, S., Graham, K., and Bloomfield, K. 2012. Social inequalities and gender differences in the experience of alcohol-related problems. Alcohol and Alcoholism 47(5):597–605, PMID: 22542707

Gruenewald, P.J., Remer, L.G., and LaScala, E. A. 2014. Testing a social ecological model of alcohol use: The California 50-City Study. Addiction 109(5):736–745, PMID: 24304295

Hahn J A and Samet J H.2010. Alcohol and HIV disease progression: weighing the evidence. Curr HIV/ AIDS Rep. 7(4):226–233. *PubMed PMID*: 20814765. Pubmed Central PMCID: 2938419.

Hahn, J. A., Woolf-King, S. E., & Muyindike, W. 2011.Adding fuel to the fire: alcohol's effect on the HIV epidemic in sub-Saharan Africa.*Current HIV/AIDS Reports*, 8, 172-180

Holmila, M., Makela, P., & Osterberg, E. 2011.A window to alcohol problems and politics in Africa, KettilBruun Society meeting in Uganda. *Nordic Studies on Alcohol and Drugs*, 28(1), 97–100.

Horvath,T., Misra, K., Epner, A. K., Cooper, G. M. 2014. *Addictions*. http://www.dekcsb.org/1408-addictions/article/48355-moral-and-spiritual-causes-of- addiction

Kalichman. S. C, AmaralC.M,White .D, Swetsze .C,Kalichman M.O, Cherry.C, Eaton .L, 2012. Alcohol and Adherence to Antiretroviral Medications: *Interactive Toxicity Beliefs among People Living with. J Assoc Nurses AIDS Care*. 2012; 23(6): 511–520. doi:10.1016/j.jana.2011.11.005.

Kekwaletswe C.T and Morojele N.K. 2014 .Alcohol use, antiretroviral therapy adherence, and preferences regarding an alcohol-focused adherence intervention in patients with human immunodeficiency virus.

Kinyanda, E., Weiss H.A, Mungherera M, Onyango-Mangen P, Ngabirano E, Kajungu R, (2012). Psychiatric disorders and psychosocial correlates of high HIV risk sexual behaviour in war-affected Eastern Uganda. AIDS Care; 24 (11):1323–32.

Kinyanda, E., Weiss H.A, Mungherera M, Onyango-Mangen P, Ngabirano E, Kajungu R, (2013). Prevalence and risk factors of attempted suicide in adult war- affected population of eastern Uganda. *Crisis*; 22:1–10

Korthuis P T, Fiellin DA, McGinnis KA, 2012. Unhealthy alcohol and illicit drug use are associated with decreased quality of HIV care. *J Acquir Immune DeficSyndr*.

Kresina, T. F., Conder, L. D., & Lapidos-salaiz, I. F. 2016. The Impact of Screening , Diagnosis and Management of Alcohol Use Disorders in HIV Care in Low and Middle Income Countries, LOPH, 2012.*Louisiana HIV/AIDS Surveillance Quarterly Report, Louisiana Department of Health and Hospitals*, OoPH, SHPS, New Orleans, La, USA,

Machtinger E L, Wilson TC, Haberer J E, Weiss D S 2012. Psychological trauma and PTSD in HIV-positive women: a meta-analysis. *Aids Behav*. 16:2091–10

Mafigiri, R., Matovu, J. K. B., Makumbi, F. E., Ndyanabo, A., Nabukalu, D., Sakor, M., Wanyenze, R. K. 2017. HIV prevalence and uptake of HIV/AIDS services among youths (15-24 Years) in fishing and neighboring communities of Kasensero, Rakai District, South Western

Medleya A, Setha P, Pathakb S, Howard .A, DeLucaa .N, Matikod. E, Mwinyie .A, 2014.Alcohol use and its association with HIV risk behaviors among a cohort of patients

attending HIV clinical care in Tanzania, Kenya, and Namibia. *AIDS Care*. 26(10): 1288–1297. doi:10.1080/09540121.2014.911809

MOH, (2014).*HIV and AIDS Uganda Country Progress Report*(unpublished).

Naqvi, N. H., &Bechara, A. 2009. The hidden island of addiction: The insula. *Trends in Neurosciences*, 32(1), 56-67. doi: 10.1016/j.tins.2008.09.009

Neblett Robyn .C , Hutton, H.E, Lau Bryan, McCaul Mary E, Moore Richard D, ChanderGeetanjali 2011. Alcohol consumption among HIV-Infected Women.Impact on Time to Antiretroviral Therapy and Survival.*Journal of Women's Health* (15409996), 20(2), 279-286. doi:10.1089/jwh.2010.2043

Patrick, M.E., Wightman, P., Schoeni, R.F.; and Schulenberg, J.E. 2012. Socioeconomic status and substance use among young adults: A comparison across constructs and drugs. *Journal of Studies on Alcohol and Drugs* 73 (5):772–782. PMID: 22846241

Pechmann, C., Zhao, G., Goldberg, M. E., &Reibling, E. T. 2003. What to convey in antismoking advertisements for adolescents: The use of protection motivation theory to identify effective message themes. *Journal of Marketing*, 67(2), 1-18. doi: 10.1509 /jmkg.67.2.1.18607

Puoti M, Moioli MC, Travi G, Rossotti R. 2012. *The burden of liver disease in human immunodeficiency virus-infected patients.Semin Liver Dis*. 32(2):103–113. PubMed PMID: 22760649.

Richardson, T., Elliott, P., and Roberts, R. 2013. The relationship between personal unsecured debt and mental and physical health: *A systematic review and meta-analysis. Clinical Psychology Review* 33(8):1148–1162, PMID: 24121465

Rubio, Olfson, 2013. Quality of life following remission of mental disorders: findings from the National Epidemiologic Survey on Alcohol and Related Conditions.

Santosa G.M, Emenyonua N.L, Bajunirwec .F, Mocelloa A.R, Martina J.N, Vittinghoffa. E, Bangsbergd. D.R, Hahna J.A, 2014. Self-reported alcohol abstinence associated with ART initiation among HIV-infected persons in rural Uganda. *Drug and Alcohol Dependence Journal*, 151– 157

Shacham E, Hoffer L, Overton ET., 2011. Perceptions of alcohol risk among individuals living with HIV. AIDS Care 23:107–112.

Sremac, S. 2010. Addiction, narrative and spirituality: Theoretical-methodological approaches and overview. *Religija I Tolerancija*, 8(14), 253-270. Retrieved from http://www.academia.edu/327196/, accessed, May 2017.

http://www.ubos.org/UNHS0910/chapter7.Average%20Monthly%20Household%20Income.html , accessed on 06, October, 2017.

Strauss SM, Munoz-Plaza CE, Tiburcio NJ, Gwadz M 2012. Barriers and facilitators in implementing "prevention for positives" alcohol-reduction support: the perspectives of directors and providers in hospital-based HIV care centers. *J Assoc Nurses AIDS Care* 23:30–40.

Sundararajan, Wyatt .M.A, Woolf-King .S, Pisarski .E, Emenyonu. N, Muyindike W.R, Hahn.J.A, Ware.N.C, 2014. Qualitative Study of Changes in Alcohol Use Among HIV-Infected Adults Entering Care and Treatment for HIV/AIDS in Rural Southwest Uganda. *AIDS Behaviour*.19:732–741 DOI 10.1007/s10461-014-0918-5

Wandera B, Tumwesigye NM, Nankabirwa JI, Kambugu AD, Parkes-Ratanshi R, Mafigiri DK, KapigaSaidi, Sethi Ajay K.2015. *Alcohol consumption among HIV-infected persons in a large Urban HIV clinic in Kampala, Uganda*.

Webb, E., Ashton, C. H., Kelly, P., &Kamali, F. 1996. Alcohol and drug use in UK university students. *The Lancet*, 348(9032), 922-925. doi: 10.1016/S0140-6736(96)03410-1

Webb, T. L., Sheeran, P., &Luszczynska, A. 2009.Planning to break unwanted habits: Habit strength moderates implementation intention effects on behaviour change.*British Journal of Social Psychology*, 48(3), 507-523.doi: 10.1348 /014466608X370591

West, R., & Brown, J. 2013. *Theory of addiction*. Malden, MA: Blackwell Publishing Ltd. Retrieved from http://66.199.228.237/boundary/addiction/Theoryofaddictionfirsthalf.pdf, accessed, 15th February 2017.

WHO,2012.*Gender, alcohol and culture: an international study* (GENACIS).

WHO, 2010.*First Global Report on Substance Use Disorders Launched*. http://www.who.int/substance_abuse/activities/genacis/en/index.html. Accessed on 4th, November 2015.

UBOS,(2014). National Population and housing Census. Uganda Bureau of Statistics, 73 pp.Retrieved from http://www.ubos.org/onlinefiles/uploads/ubos/NPHC/NPHC 2014 Provisional Results Report.pdf, accessed on August 2016.

UNAIDS, 2010a. *UNAIDS Report on the Global AIDS Epidemic*. Geneva:

UNAIDS.http://www.unaids.org/globalreport, accessed 21 March 2016.

WHO 2011.*Global Status Report on Alcohol and Health. Geneva*:

WHO.http://www.who.int/substance_abuse/publications/global_alcohol_report/en/, accessed 21 March 2016

Uganda. *BMC Public Health*, *17*(1), 251. http://doi.org/10.1186/s12889-017-4166-2

3, 1–8.

Statistics Research, *II*(11), 1–22.

APPENDICES

Appendix I: Consent form

District: ……County……..……..…

My name is Benedict Mukamba, a student at Uganda Martyrs University, faculty of health sciences. I would like to interview on the "**Determinants of alcohol use and its effects among people living with HIV/AIDS in Kasese District.** On average, the interview will take about 40 minutes and all the information provided will be kept confidential for the researcher. If you agree you can allow me to proceed.

Consent

Agree ☐Disagree ☐

If you are not comfortable to answer any question that makes you feels uncomfortable. Please, feel free to end the interview at any time. The information shall remain confidential. For the future correspondence; you can contact the researcher at

Mobile Number: 0787445090

Email: bmukamba@yahoo.com

Appendix II: Semi- structured Questionnaires

In am Benedict; a student at Uganda Martyrs University and I am carrying a research on the " Socio-economic determinants and effects of Alcohol use among people living with HIV in Kasese District." Your response is vital for this study

Name……County / Municipality ……..

PART- A

SOCIAL DEMOGRAPHIC BACKGROUND

1. Sex

   a) Male ☐

   b) Female ☐

2. Age group

   a) 18-24 years ☐

   b) 25- 35 years ☐

   c) 36- 50 years ☐

   d) 51-70 years ☐

3. Educational Level

   a) No formal education ☐

   b) Completed primary school ☐

   c) Completed secondary school ☐

   d) College or University ☐

4. Religion affiliation

   a) Catholic ☐

   b) Anglican ☐

   c) Muslim ☐

   d) Sevenths day Adventist ☐

   e) Pentecostal or born again ☐

   f) Others. Please specify…… …….

5. Marital status

   a) Married ☐

   b) Single ☐

   c) Divorced ☐

   d) Separated ☐

   e) Cohabiting ☐

   f) Widow/er ☐

   g) Abandoned (ex-partner) ☐

6. Residence Locality

   a. Urban ☐

   b. Semi-urban ☐

   c. Rural ☐

7. Health facility enrolled for HIV care.

   a. Kasanga Primary Health Care Centre

   b. Bwera Hospital

   c. Kilembe Hospital

   d. Kasese Municipal Health Centre III

8. Employment status

   a. Are you employed Yes ☐ No ☐

9. Monthly Income Levels

   a. < 50,000UGX

   b. 50,000-250,000 UGX

   C. 250,000-500,000UGX

   d. > 500,000 UGX

10. Did you consume alcohol in the last 12 months? Yes ☐ No ☐

PART B

SOCIO-ECONOMIC DETERMINANTS FOR USE OF ALCOHOL

11. Use the following scale to rank what determines taking alcohol when infected with HIV

1 = Strongly agree 2 = Agree 3 = Not sure 4 = Disagree 5 = Strongly disagree

Nos.	**Statements**	5	4	3	2	1
A	Age influence a HIV person to abuse alcohol					
B	Taking alcohol is leant when one has HIV					
C	Income levels influence a HIV person to abuse alcohol					
D	Families producing alcohol influence HIV person to abuse it					
E	Peer group determines a person with HIV to abuse alcohol					
F	Stress determines a person with HIV to abuse alcohol					
G	Gender determines the use of alcohol					
H	The environment determines a person to abuse alcohol					
I	Easily availability of alcohol					

h). Mention other factors that determines taking of alcohol among PLHIV

……

……

PART B

BEHAVIOURS AND DECISION MAKING AMONG PLHIV

12. Use the following scale to answer the behaviour of PLHIV when drunk

1 = Strongly agree 2 = Agree 3 = Not sure 4 = Disagree 5 = Strongly disagree

Nos.	**Statements**	5	4	3	2	1
A	PLIV are violent when drunk					
B	PLHIV become talkative when drunk					
C	PLHIV are interested in fighting when drunk					
D	PLHIV become sexually active when drunk					
E	PLHIV cannot think well					
F	It is alcohol that makes PLHIV non-cooperative					

State other behaviours associated with PLHIV when drunk

……

……

14. Use the following scale to answer the influence of alcohol to decision making among PLHIV

1 = Strongly agree 2 = Agree 3 = Not sure 4 = Disagree 5 = Strongly disagree

Nos.	**Statements**	5	4	3	2	1
A	Alcohol makes PLHIV irresponsible					
B	Alcohol makes PLHIV thoughtful about death					
C	It is alcohol that influences men to undermine to decisions from their women					
D	Alcohol makes men not to work in the farm					
E	Alcohol makes men not to give money to their children for tuition					
F	Alcohol makes PLHIV to save money for the future					
G	Alcohol influences PLHIV not to cater for the families					

State other influence of alcohol to PLHIV in making decisions

……

……

PART C.

SOCIO-ECONOMIC EFFECTS OF ALCOHOL USE AMONG PLHIV

15. Use the following scale to answer the effects of alcohol to PLHIV

1 = Strongly agree 2 = Agree 3 = Not sure 4 = Disagree 5 = Strongly disagree

Nos.	**Statements**	5	4	3	2	1
A	Alcohol increases risks for the spread of HIV among PLHIV					
B	Alcohol has increased death rates among PLHIV					
C	It influences them not to take drugs					
D	Alcohol increase poverty among PLHIV					
E	Alcohol increases accidents on the road among PLHIV					
F	Alcohol increase on the family neglect among families					

Mention other effects of alcohol among PLHIV

……

……

16. Give your recommendation on alcohol among PLHIV

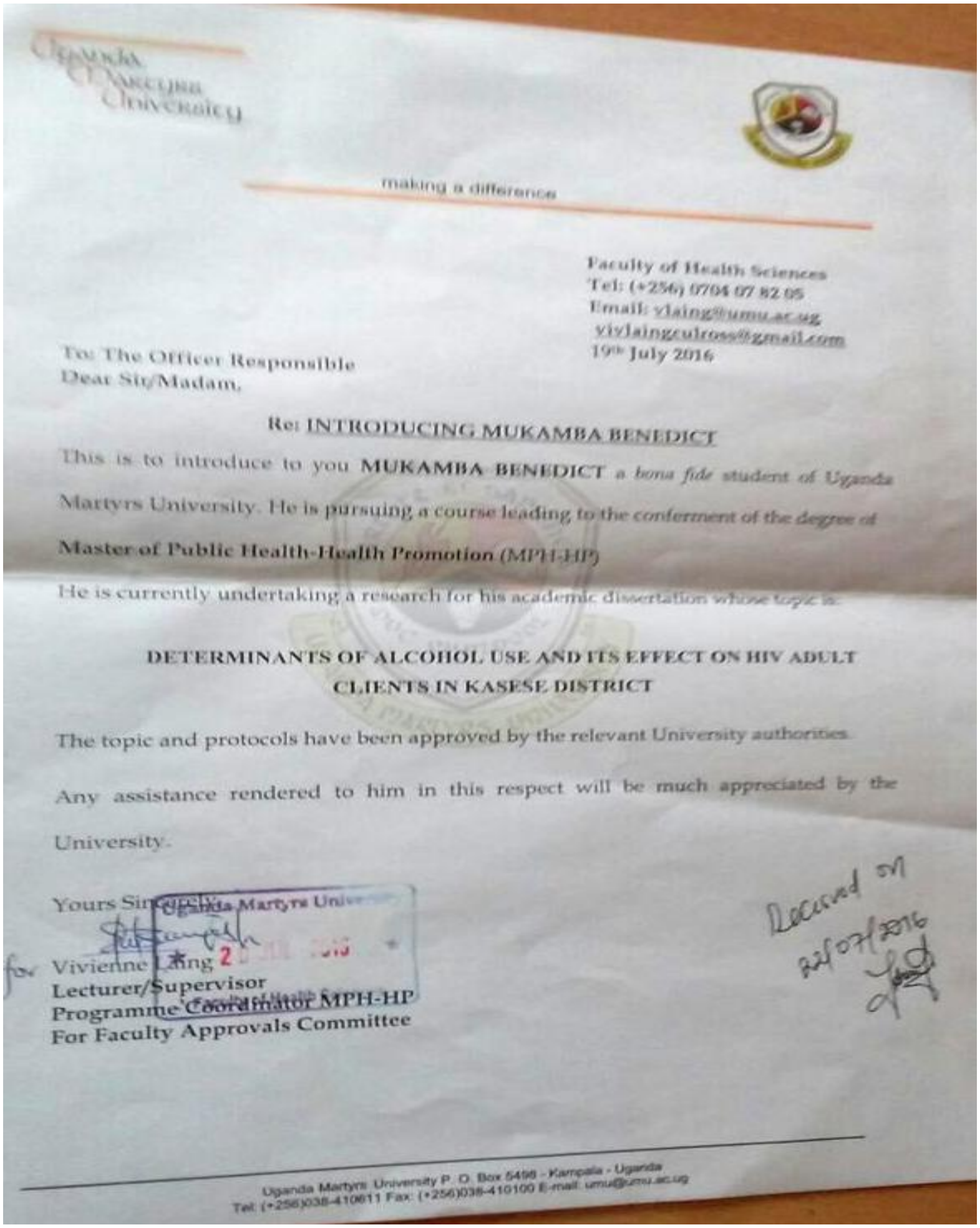
……

……

Thank you for your cooperation

END

Appendix III: Introductory Letters



Uganda Martyrs University

making a difference

Faculty of Health Sciences
Tel: (+256) 0704 07 82 05
Email: vlaing@umu.ac.ug
vivlaingculross@gmail.com
19th July 2016

To: The Officer Responsible
Dear Sir/Madam,

Re: INTRODUCING MUKAMBA BENEDICT

This is to introduce to you **MUKAMBA BENEDICT** *a bona fide* student of Uganda Martyrs University. He is pursuing a course leading to the conferment of the degree of **Master of Public Health-Health Promotion** (MPH-HP)

He is currently undertaking a research for his academic dissertation whose topic is:

DETERMINANTS OF ALCOHOL USE AND ITS EFFECT ON HIV ADULT CLIENTS IN KASESE DISTRICT

The topic and protocols have been approved by the relevant University authorities.

Any assistance rendered to him in this respect will be much appreciated by the University.

Yours Sincerely,

for Vivienne Laing
Lecturer/Supervisor
Programme Coordinator MPH-HP
For Faculty Approvals Committee

Received on 22/07/2016

Uganda Martyrs University P. O. Box 5498 - Kampala - Uganda
Tel: (+256)038-410611 Fax: (+256)038-410100 E-mail: umu@umu.ac.ug

DHO's OFFICE

Tel: +256 772 669 062
Email: baseka.yusuf@gmail.com
Website: www.kasese.go.ug

KASESE DISTRICT LOCAL GOVERNMENT
P. O. BOX 149,
KASESE
UGANDA

In any correspondence on this subject please quote.

Date: 22nd July 2016

The Administrator/MS

_____

_____

_____

I am writing to introduce to you Mr MUKAMBA BENEDICT Reg. **2015-M281-10008**, a student of Uganda Martyrs University pursuing a post-graduate course leading to the Award of Masters of Public Health –Health Promotion. He is currently undertaking research on the:

DETERMINATS OF ALCOHOL USE AND ITS EFFECTS ON HIV ADULT CLIENTS IN KASESE DISTRICT.

His research area will be Kilembe Hospital, Bwera Hospital, Kasese Municipal Health Centre, and Kasanga Primary Health Care.

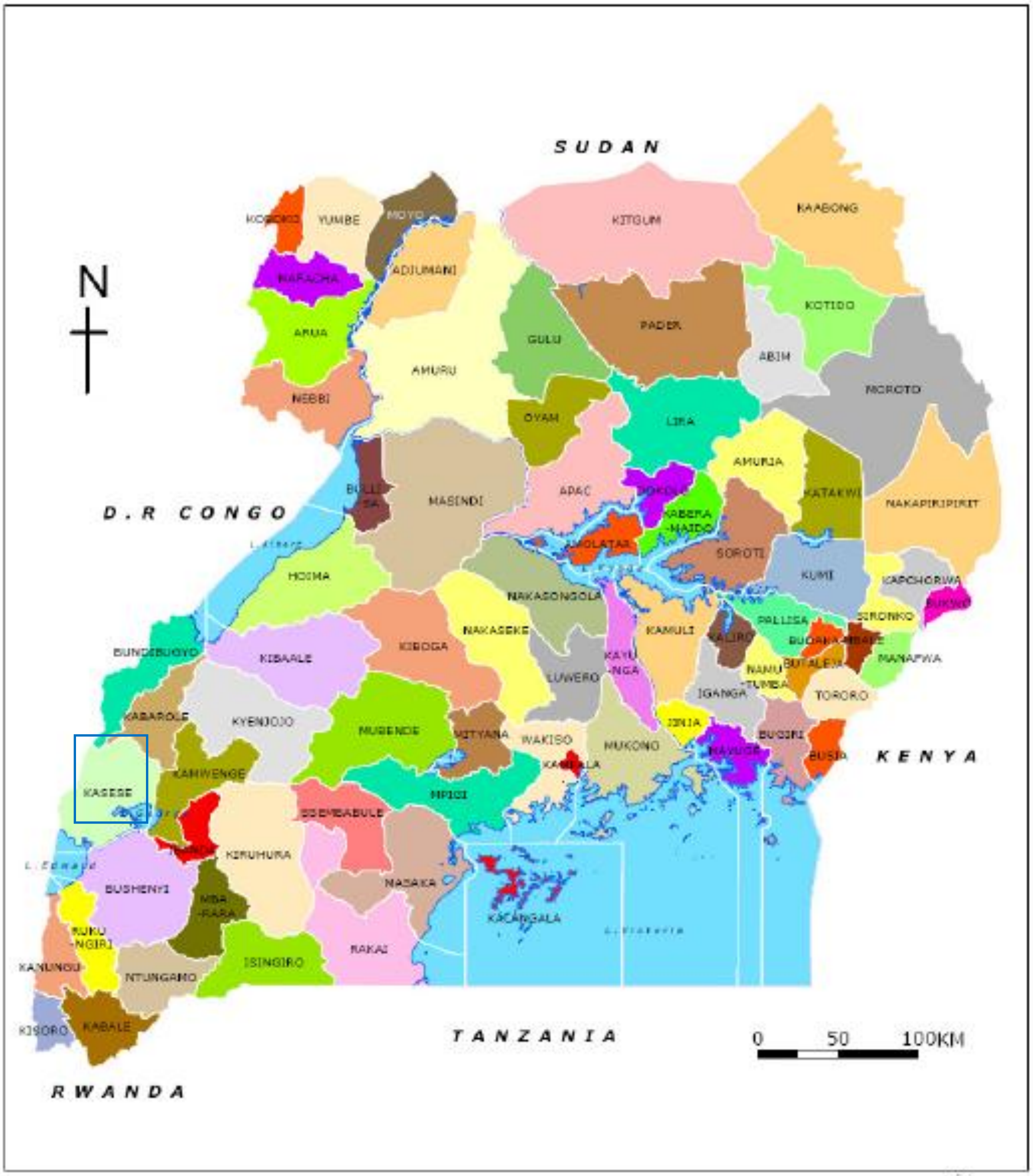
Any support rendered to him will highly be appreciated.

Yours Sincerely,

DISTRICT HEALTH OFFICER
KASESE DISTRICT LOCAL GOVERNMENT

Dr. Baseka Yusuf
DISTRICT HEALTH OFFICER
Kasese District

Appendix IV: Map of Uganda showing the location of Kasese District



Appendix V: Map of Kasese District