CO-MORBID DEPRESSION AND ALCOHOL USE DISORDER AMONG YOUTH LIVING WITH HIV ATTENDING A COMPREHENSIVE CARE CLINIC AT A PRIVATE HOSPITAL IN NAIROBI, KENYA.

ABANJA WILLIAM OTIENO.

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DEPARTMENT OF PSYCHIATRY, SCHOOL OF MEDICINE, COLLEGE OF HEALTH SCIENCES, UNIVERSITY OF NAIROBI

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SUPERVISORS:

Dr. Pius Kigamwa

Dr. Mathai Muthoni

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DECLARATION

This research report is my original work and has not been presented to any other learning institution.

Name: Abanja William Otieno

Signature: Date:

APPROVAL OF SUPERVISORS

This is to certify that this research report has been carried out independently by Abanja William Otieno, a Master of Science in clinical psychology student. It was approved by the Kenyatta National Hospital/University of Nairobi Ethics review committee and with our approval as University of Nairobi Supervisors:

Dr. Pius Kigamwa,

Senior Lecturer, Department of Psychiatry,

College of Health Sciences, University of Nairobi.

Signature: _____

Date: _____

Dr. Mathai Muthoni,

Senior Lecturer, Department of Psychiatry,

College of Health Sciences, University of Nairobi.

Signature: _____

Date: _____

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DEDICATION

This research report is especially dedicated to CCC of Mater Misericordiae Hospital.

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ABBREVIATIONS

AIDS	Aquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
AUDIT	Alcohol Use Disorders Identification Test.
BDI	Becks Depression Inventory
DSM 5	Statistical Manual for Mental disorder 5
HTS	HIV Testing and Counselling Services
HIV	Human Immunodeficiency Virus
MCCC	Mater Comprehensive Care Centre
NACC	National AIDS Control Council
PLWHA	Persons Living With HIV/AIDS
SPSS	Statistical Package for Social Sciences
WHO	World Health Organization

DEFINITION OF TERMS

Alcohol use disorder is a pattern of alcohol use that involves problems controlling drinking, being preoccupied with alcohol, continuing to use alcohol even when it causes problems, having to drink more to get the same effect, or having withdrawal symptoms when one rapidly decrease or stops drinking

Depression: is a mood disturbance characterized by feelings of sadness, despair and loss of interest in previously pleasurable activities. It is a serious mental illness that leaves an individual feeling low most of the time and finding coping hard. Depression affects how a person feels, behaves and thinks.

Drug use: Using a psychoactive substance that impairs/alters the way the mind of an individual functions.

Youth is a person between the ages of 15 and 24 years

x

ABSTRACT

BACKGROUND: Psychiatric morbidity has been associated with HIV disease since the beginning of the AIDS epidemic. In youth with HIV infections alcohol use and depression make the management more difficult and worsen the prognosis. Alcohol use also have adverse interactions with the medications used hence reducing the effectiveness of the medications. Globally, depression is one of the leading causes of illness and disability among adolescents. Dispite this, minimal research has been done locally on the prevalence of various psychiatric morbidities associated with HIV infection with none focusing on youth aged 15-24years old.

STUDY OBJECTIVE: To determine the prevalence of depression and alcohol use disorder among youth aged 15-24yrs under care for HIV & AIDS.

DESIGN: Cross sectional analytical study design.

STUDY SITE: Comprehensive Care Clinic (CCC) of Mater Misericordiae Hospital, Nairobi Kenya.

METHOD: Survey method of HIV infected youth aged 15-24 yrs under CCC was used.

Participants were given researcher designed questionnaire and subjected to both Alcohol Usue Disorder Inventory Test (AUDIT) and Beck's Depression Inventory (BDI) which are self-administered tests to a total of 194 participants. Analysis and presentation of results were done using statistical models and SPSS software.

RESULTS: The prevalence of alcohol use disorder was 13% and the prevalence of depression was 77%. The sociodemographic factors that did not influence either or both alcohol use disorder and depression with a P-value above .05 were level of education, religion, residence and marital status. Income, occupation, gender and age had a strong association with both alcohol use disorder and depression at a P value of .000. The study also established an association between alcohol use disorder and depression at an Odd ration of 0.04.

CONCLUSION: Youth with HIV/AIDS aged 15-24yrs receiving treatment still experience considerable alcohol use disorder and depression. These youths can benefit from improved delivery of psychiatric care adjunct to psychotherapy during follow up in CCC.

RECOMMENDATION: In order to solve the twin problem of alcohol use and depression among HIV infected youth, key stakeholders need to design multidimensional strategies to educate youth while creating impetus for them to avoid alcohol use and receive comprehensive screening, diagnosis and treatment of depressive symptoms. It would be vital for preventive strategies to be implemented in all CCC's programes.

CHAPTER ONE: INTRODUCTION

Psychiatric morbidity, sexual behaviour and relationship characteristics have been associated with HIV disease since the beginning of the AIDS Epidemic (Nduna, Jewkes, Dunkle, Jama & Colman, 2010). The diagnosis of HIV infection or AIDS can set a crisis state for the individual, family and their friends (Kamen, Arganbright & Kienitz, 2015). This may cause psychological distress. This is because the Persons Living with HIV/AIDS (PLWHA) may experience losses such as health, strength, mobility, relationship, attraction, and ability to function at home and in the community. The losses cause much grief, unhappiness and uncertainty and often may lead to psychiatric morbidity.

NACADA (2012) and Kamau, Kuria, Mathai, Atwoli & Kangethe (2012) identifies alcohol and substance use disorder and depression as psychiatric morbidity among young adults infected with HIV & AIDS.

According to statistical manual for mental disorder (DSMV, 2013), depression is a mood disturbance characterized by state of sadness, despair and loss of interest in previously pleasurable activities. This results into feelings of hopelessness and helplessness, exhaustion, inability to find pleasure, irritability, altered appetite, disturbed sleep, restlessness or lethargy and reduced concentration. Thoughts of self-harm, death or suicide may also occur.

Alcohol use disorder on the other hand is characterized by inability to control drinking, preoccupation with alcohol, continuous alcohol use despite negative consequences, drinking more to achieve similar effect, or experiencing withdrawal symptoms when one suddenly reduces or stops consuming (Ibid, 2013). Reports indicate that youth still remain vulnerable to HIV transmission (NACC, 2016; UNAIDS, 2013).

Youth as defined by United Nations, are persons aged between 15 and 24 years. It is a transitional period from the dependence of childhood to adulthood's independence. It is a phase characterized by exploration and navigation in peer relationships, gender norms, sexuality and economic responsibility. The youth's abstract capacity and critical mind also develops, along with a sense of self-awareness as society expects emotional maturity (UNICEF, 2015).

This transitional change when not well negotiated with rightful support can sometimes make individual suffer loneliness, self-doubt and peer influence (Stop AIDS, 2016). Alcohol use disorder, depression, early sexual debut and suicide, for instance, are some of problems youth face while transiting this stage.

With this background, it is therefore important for healthcare institutions working with youth to explore psychiatric morbidity and its predisposing factors and promote youth mental health.

1.0 Background

Youth represent a rising share of population living with HIV worldwide. In 2016, 610,000 young people aged 15 to 24 are reported as newly HIV infected (NACC, 2016). According to UNICEF, (2017), Sub-Saharan Africa and South Asia are regions with high HIV positive prevalence. Of the 2.1 million infected young persons, about 1.7 million (84 per cent) live in sub-Saharan Africa where Kenya belongs (UNICEF, 2017).

Kenya falls among the four most HIV 'high burden' countries in Africa. About 1.5 million people were living with HIV infection by 2015 (NASCOP, 2016). Though the nation recorded a 19% general decline in new HIV/AIDS infections between the year 2013 and 2015, a 17% rise in new infections among youth is noted (NACC, 2016). This is alarming as reported by Nduku Kilonzo the National AIDS Control Council Director, singling out young people (15-24 years) to

have contributed 51% in new infections in the year 2015, a rise from 21% recorded in 2013 (personal communication, October 27th 2016).

In 2015, 35,776 new infections are said to have been recorded among the youth bringing the total of young people living with HIV to 268,586. Worse still, an average of 4-5 new infections occur every hour bringing an average of 97 young people infected on a daily basis. Above all 3,853 youths were reported to have died of HIV by 2015 (NACC, 2016).

As further discussed by National AIDS Control Council (NACC), AIDS is the number one cause of death and psychiatric morbidity among Kenyans aged between 10 and 24 years. However, projections are that psychiatric morbidity seems to be on the rise as manifested by mood related disorders as well as drug related disorders among HIV infected population. Some studies have shown that by reducing alcohol use in HIV patients not only reduces alcohol related medical and psychiatric consequences but also reduces HIV transmission and drug use (NIDA, 2012; Lucas et al., 2002).

A report published in the Kenya daily nation of 3/4/2017 on national maters on HIV and youth, highlights depression as a major cause of increase suicide rates among teens and therefore the need to address mental health among HIV youth. According to the report misdiagnosis of mental health in Kenya is just one in a litany of the inadequacies that plague mental healthcare in Kenya. The report raises concerns that mental illness is likely to be misdiagnosed as other ailments such as malaria, migraine and stomachache, thus delaying crucial treatment for the nearly 11.5 million Kenyans with the mood disorders. Further still the provision of holistic care among youth living with HIV is compromised by lack of clinical data, scarce resources and interventions and limited

awareness by healthcare providers and patients. Worse still there exist no published researches in Kenya for depression diagnosis or screening amongst teenagers as compared to adults.

With presence of reliable statistics and fuller understanding of alcohol and other mental health disorders like depression among youth, researchers may hence tailor treatment to individuals suffering from comorbid addiction and mental health disorders (Abram, 2016). However there exists no such data on prevalence of alcohol use, depression and any established relationship among HIV youth aged 15-24. This study aims to fill that gap.

1.1 Problem Statement

The youth in Kenya are at high risk of HIV infection because of early sexual debut (Idele et al., 2014; UNAIDS, 2013). The problem is compounded by sociocultural factors such as high poverty level (UNICEF, 2017) and substance use (NACADA, 2012). Moreover substance use is linked to depression as well as increased susceptibility to HIV infection. Among youth with HIV infections alcohol use and depression may make the management more difficult and worsen the prognosis because of poor compliance to medication. Alcohol use may also have adverse interactions with the medications used hence reducing the effectiveness of the medications (Kalichman et al., 2012).

According to Abram, (2016), although a lot is being done to address the physical impact of HIV/AIDS including the provision of ARV, the mental health of youth has not received adequate attention. This may partly be because mental disorders like depression and alcohol disorder may not be all too obvious as say mouth ulcers, and it is an area that has not been adequately researched. There is however enough evidence to indicate that mental wellbeing is an important factor in the recovery process in many illnesses and in compliance to treatment and adoption of a

healthy life style (Abram, 2016). It is against this background that it is important to focus on AIDS related psychiatric disorders (in this case alcohol disorder and depression) so that intervention programmes /strategies are developed to address the related issues.

According to UNESCO, (2014) young people are often forgotten in national HIV and AIDS plans as emphasis is accorded to adults and children. This result into lack of friendly health services for youth that may explore the mental health of youth and in this case alcohol use or depression. Therefore alcohol use and its related problems go undetected and not treated hence affecting compliance and need to be understood better. This is the gap that the study intended to bridge by looking at the prevalence of alcohol use disorders, depression and other associated social demographic factors among youth under care for HIV/AIDS.

1.2 Study Objective

1.2.1 General Objective

The general objective of this study was to determine co-morbidity between depression and alcohol use disorders in HIV infected youth aged between 15-24yrs attending the Comprehensive Care Clinic (CCC) at Mater Misericordiae Hospital.

1.2.2 Measureable specific objectives

The following measurable specific research objectives were determined to guide the study in determining:

1. Prevalence and severity of depression among youth under care for HIV/AIDS.
2. Prevalence of alcohol use disorders among youth under care for HIV/AIDS.
3. The association between depression and alcohol use disorders in the study population.

4. Social demographic factors associated with either or both alcohol use disorders and depression among youth under care for HIV/AIDS.

1.3 Research Questions

To accomplish the above research objectives this study was guided by the following research questions:

1. What is the prevalence of depression disorder in HIV/AIDS infected youth?
2. What is the prevalence of alcohol use disorder in HIV/AIDS infected youth?
3. What are the social demographic factors associated with either or both alcohol use disorders and depression among youth under care for HIV/AIDS?
4. Is there relationship between depression, alcohol use disorder and socio-demographic characteristics among the HIV infected youth?

1.4 Significance and Justification/Rational

It is evident in every HIV comprehensive treatment centers that treatment failure and poor adherence to treatment among youth is not only increasing but also poses a major threat to the milestones already made towards global success in HIV treatment. Youth today not only battle with HIV and its effects but also immensely battle with mental illness like depression and alcohol use disorder. This co-morbidity threatens the achievement 95:95:95, Kenya HIV vision 2020 and holistic wellbeing whereby 95% of every youth placed on treatment must attain viral suppression having strictly complied with treatment. This compliance can be realized when mental health of youth forms part of care and this requires baseline statistics/ prevalence rate which the study seeks to determine. The findings of this study will benefit the society in realizing

its vision; considering that youth defines the future of any society and quality of their mental health determines development in society.

Given that no similar research specifically on this category of youth has been done, this is groundbreaking given that there are enough evidence to indicate that mental wellbeing is an important factor in the recovery process in many illnesses and in compliance to treatment and adoption of a healthy life style (Abram, 2016). Therefore a focus on AIDS related psychiatric disorders (in this case alcohol disorder and depression) among youth aged 15-24 with well demonstrated prevalence rate contributes to intervention programmes /strategies in HIV care, treatment and support of youth.

The study finding forms literature and in addition to the already existing literature on alcohol use disorder, depression and socio-demographic factors related to HIV infections particularly with regards to prevalence of depression and alcohol use among youth aged 15 to 24 years in HIV treatment setting which was lacking in our country. Finally the study acts as a point of reference for any further research undertaken to address any arising issue or interests regarding this or other related topics.

1.5 Study Assumptions

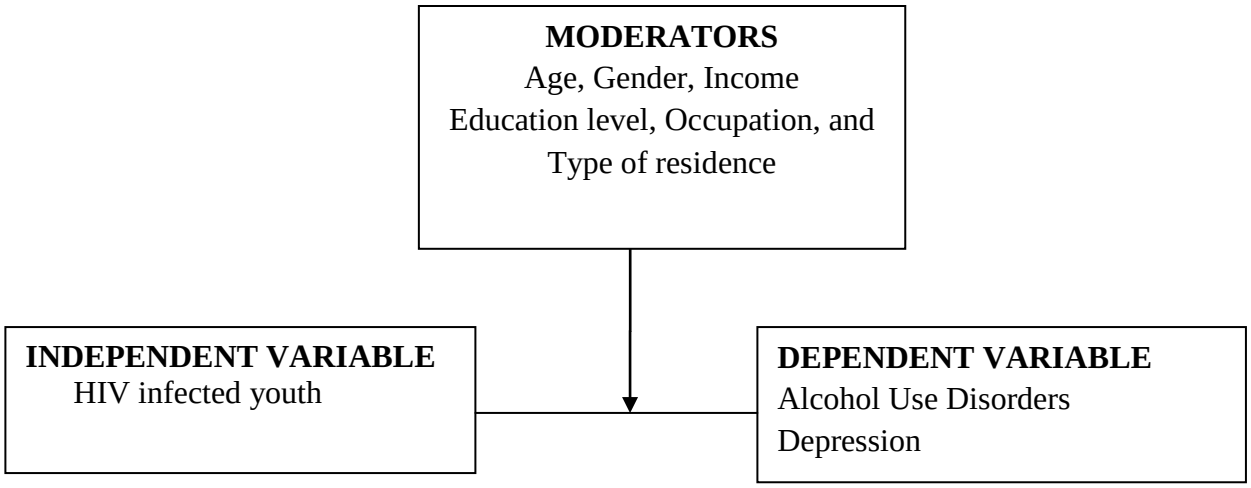
The researcher assumed that the participants answered the interview questions in an honest and candid manner. The researcher explained to participants that their responses were to be confidential and kept secure. No name was recorded anywhere on the tools but instead coded. Researcher provided personal contacts to improve communication when need be and all filled questionnaires and tools were dropped in a locked pigeon hole box provided at the youth desk.

1.6 Scope of the Study

The research targeted HIV positive youth aged 15-24 yrs receiving care, treatment and support and that meet inclusion criteria.

1.7 Conceptual /Theoretical Framework

Figure 1: Independent and Dependent Variables



The independent variable in the study was 'being HIV positive' and the dependent variables were alcohol use disorders and depression. The relationship between being HIV positive and developing an alcohol use disorder and or depression can be moderated by the age and education, with older youth in the higher classes being more likely to use alcohol and get depressed as they navigate the transition to adulthood. Another moderator is gender given the gender differences in behavior and risk taking in adolescence and a third important moderator is social economic status- though the process is not straight forward- youth experiencing economic hardships are likely to get more depressed but youth who have easy access to money are also more likely to use alcohol. It was interesting to find out how Social economic status influences both Alcohol use and development of depression as indicated in the research findings.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

Youth who live with HIV may face an increased burden of mental and behavioural health disorders. Optimal compliance to ART is critical to maintaining viral suppression and avoiding morbidity and mortality among HIV-infected youth. Among HIV infected youth, depression and abuse of substance such as alcohol have been associated with poor adherence to ART (UNICEF, 2015; Kalichman, 2012). This co-morbidity significantly compromises not just quality of youth life but also thwarts efforts towards success of HIV pandemic.

2.1 Socio-Demographic Factors, HIV Infected Youth and psychiatric co-morbidity

The HIV epidemic has disproportionately affected the most impoverished regions of the world and among these countries HIV is concentrated in the poor people in society and the marginalized (Kamau et al., 2012). Kenya is no different. This factor has also been linked to alcohol use disorder and depression including involvement in sexually risky behavior through engaging in sex with multiple sexual partners or unprotected sex for money that can lead to secondary infection in HIV infected youth increasing chances that already infected youth can spread the virus to other non- infected youths (ibid, 2012).

2.2 Depression among Youths Living with HIV

According to a clinical study done in USA by Walsh, Seidman & Sysko (2017) on depression in a sample of 130 YLWH between 11 and 25 years old, findings indicated that approximately 24% of the sample screened positive for depression-risk. Most commonly endorsed symptoms included fatigue at 54.3% and 48.5% sleep difficulties. The study reveals no significant

difference on depressive symptoms by age, gender, race, ethnicity, or sexual orientation. In the study, youth who acquired HIV behaviorally were more likely to endorse the critical item (i.e., self-harm and/or suicidal ideation) than youth who acquired HIV perinatally. 40% of the sample of 51 youth had a follow-up treatment plan leaving one to wonder what happens to the remaining percent. The study concluded that YLWH who endorsed the critical item were more likely to receive follow-up action when compared to those who did not endorse the item necessitating the need to screen, identify and appropriately place for treatment.

A study done in Uganda of 82 HIV-infected adolescents ages 10–18-years found that 51.2% had scores indicating significant psychological distress, 17.1% had attempted suicide in the past year, 19.5% had ever attempted suicide, and 30.5% had experienced psychotic symptoms in the past (Musisi & Kinyanda, 2009).

Another study done in Botswana of 692 HIV infected, treated children ages 8–17 years using a culturally-adapted and translated version of the Pediatric Symptom Checklist found that higher scores on the PSC (indicating psychosocial dysfunction) were associated with virologic failure, suggesting a critical link between psychosocial function and clinical outcomes (Lowenthal et al., 2012). Additional cross-sectional study as done in Tanzania of 182 HIV-infected adolescents between 12 and 24 years old revealed multiple suggestions of mental health challenges in this group (Dow et al., 2016).

Mental health is very important though often a neglected health challenge for youth infected with HIV. The prevalence of mental and behavioural health issues among HIV positive youth may not be well understood or addressed as HIV preventive efforts and treatment for youth is mounted in Kenya through Ministry of Health (Kamau et al., 2012).

In a Kenyan study of 162 children and adolescents infected with HIV, 49% were reported to have at least one psychiatric diagnosis or suicidality, with anxiety disorders most common (32.3%), and followed by major depressive disorder (17.8%). In their study, they did show the need to address mental health within care systems addressing HIV or primary care, (Ibid, 2012).

In conclusion, depression in youth puts a high-risk behaviour including earlier sexual debut, low condom use, substance abuse, more frequent sexual partners and unplanned pregnancy (Nduna et al., 2010). The findings may linearly have several policy and practice implications. There is need for an increased awareness of the prevalence of psychiatric conditions depression among youths seeking care at general medical facilities especially in comprehensive care centre.

2.3 Causes of Depression among HIV infected youth

According to Nduna et al., (2010), the occurrence and severity of depression among HIV infected persons are related to numerous factors such as, denial of diagnosis, its associative symptoms, Antiritroviral therapy (ART), non-adherence, history of alcohol and substance abuse, history of psychiatric treatment, stigma, stress, disability, illiteracy, unmarried status, job loss, social isolation, poverty, poor body image, migration, bereavement/ grief, death of family members, poor relationship with intimate partner, source of infection and frequenting commercial sex workers.

Stigma in HIV/AIDS has been associated with depression, and other psychosocial problems (UNAIDS, 2018). According to Kamen et al., (2015), stigmatization causes restricted social activities, and because of one's HIV status, one may start to agree with the negative stereotypes associated with HIV. Consequently this may lead to psychosocial distress, anxiety, drug abuse and depression (WHO, 2018). Stigma has been linked to condomless sex, late diagnosis &

treatment, poor retention and follow-up, suboptimal ART adherence and significantly increased complaints of anxiety and depression (Ibid, 2015).

2.3.1 Biological Model

According to Nganga (2011), a number of antidepressants raise synaptic levels of monoamine neurotransmitter serotonin. Some also raises the concentration of two other monoamine neurotransmitters that is dopamine and norepinephrine. It is from this background that the monoamine theory of depression was born. The theory postulates that a deficiency of certain neurotransmitters is responsible for the characteristics of depression. It has also been suggested that abnormal functioning of certain hormone systems, particularly involving cortisol and thyroid hormones, may be responsible for episodes of major depression (ibid, 2011).

2.3.2 Effects of Antiretroviral Drugs

Depression has also been attributed to antiretroviral drugs. A comparative review indicates that when compared to the general population, persons living with HIV on ART have a higher prevalence of anxiety and depression. The same research reveals a significant improvement on neuropsychiatric symptoms following antiretroviral drugs mainly efavirenz substituted with another drug e.g., nevirapine (Pedrol, 2015).

2.4 Effects of depression on Youth living with HIV infection

Depression causes various direct and indirect morbidities, which include suicidal behavior, increased use of health care facilities, and poor quality of life (Dow et al., 2016). Therefore it is significant to screen for depression among youths as it is linked to increased chances of HIV transmission and suboptimal adherence to ART, resulting in viral detectability and increased

disease progression (Kamau et al., 2012; Lowenthal et al., 2012). In addition, there are other mechanisms caused by depression that precipitate HIV disease progression and such includes, elevated cortisol secretion and viral replication occasioned by increased norepinephrine secretion (Nganga, 2011). Among females specifically, AIDS-related death, has been associated with chronic depression (Kamen et al., 2015).

2.5 Alcohol Use among HIV Infected Youth

Alcohol consumption among youth remains an important area of study because of the implication this maladaptive behavior has on the lives of youth and future outcomes. Some of the effects of alcohol use among the youth are; exposure to alcohol related disorders, social problems and sexually transmitted diseases including HIV (Atwoli, Priscilla, Moses, Kiende, & Evans, 2011).

According to NACADA (2012), alcohol use is linked to use of illicit drugs in particular injection drug use (IDU). This is reported as a very important mode of HIV transmission, acquisition and cross infection (Idele et al., 2014; NIDA, 2012).

2.6 Negative effects of Alcohol use among HIV infective youth

Research by Bruce, Kahana, Fernández & Harper (2013), reveals that substance use can have several negative health consequences, psychological, emotional/ mood and social effects among PLWHA. Youth often faces various unique risks that place their own and others' lives in danger. For instance, alcohol and/or drug abuse has been associated with unsafe sex as well as poor ART adherence resulting into decreased CD4 cell counts, detectable viral load, and development of ART resistant strain of HIV (Kalichman, 2012). Most young people involve in various risky

substance use behaviors (Agrawal et al., 2012) and the presence of comorbid substance use and psychiatric illnesses has been linked to poor alcohol treatment outcomes (Kuria et al., 2012).

In addition, youth under alcohol influence may engage in maladaptive behavioural symptoms as reported by Moreira et al. (2009) such as suicide, violence, injuries e.g. motor accidents and self–inflicted injuries.

Rintaugu, Ngetich & Kamande (2012) in a study among Kenyan university students, found that the outcome of alcohol abuse include misbehaviour at (32.6%), breaking of friendships (29.6%) and poor academic performance (26%).

2.7 Comorbidity of Depression and Alcohol use disorder among HIV infected youth

Depression is a common co-morbid disorder among patients diagnosed with chronic disorders. Persons with diagnosis of common chronic diseases such as cancer, heart disease, arthritis, Human Immunodeficiency Virus and Acquired Immune Deficiency Syndromes (HIV/AIDS) as well as chronicity of lung disease are at increased risk for developing depression. This association is a very important factor in HIV/AIDS patient care as it can lead to increased morbidity, mortality and higher cost in managing the viral disease (Stop AIDS, 2016).

There are a number of researches done that demonstrate prevalence of comorbidity of depression and alcohol use disorders (AUD). A study by Kuria et al., (2012) reveals increased prevalence rates (63.8%) of major depression among the alcohol dependent users. This is close to a higher limit (68%) of the estimated prevalence of co-occurrence of depression and alcohol dependence. However the study acknowledges this co-occurrence of depression and alcohol use disorders as being difficult to describe. It implies that both comorbidity shares both genetic and

environmental predisposition thereby increasing the risk of either disorders or that the two disorders may have a causal effect with each increasing the risk of developing the other.

Under causal relationship among the two disorders, depression causes AUD and vice versa as in the latter the person uses alcohol to relieve the depressive symptoms. However, there may be a reciprocal causal relationship where development of depression is increased by possibility of alcohol use (ibid, 2012). It has been shown that persons taking alcohol to lessen emotional stress, may be self-medicating with alcohol where depression precedes alcohol use disorder and alcohol use disorder precedes depression. Therefore the causal effect of alcohol use disorder causing depression implies that some instances depression resolve with alcohol dependence treatment.

It is important to note that the literature review as provided above is a general data across all ages regardless of HIV status and no actual local literature available that demonstrates the prevalence of alcohol use and depression among HIV infected youth particularly between the ages of 15 to 25 yrs. There is no published data reflecting the Kenyan situation. Furthermore the study did not investigate the prevalence of depression and alcohol dependence among HIV infected youth aged 15-24. However, its findings concluded that depression among alcohol dependent persons is high, there is recovery from depression following de-toxification and rehabilitation, and that most cases may not necessarily require treatment for the depression.

The study by Kuria et al (2012) in addition noted that depressed persons often suffer strong craving effects after detoxification and rehabilitation than those without depressive comorbidity. Therefore family history of mood disorder and life time diagnosis of depression is essential as their presence may subject on at a higher risk of developing major depression. The study concludes by stating the importance to screen for depression and assess to establish the treatment

needs necessary at detoxification and rehabilitation thus acknowledging such variables in the care of youth living with HIV (ibid, 2012).

2.8 Summary

Alcohol use and depression are common among people who are living with HIV virus (NIDA, 2012). Effects following use of alcohol have serious implications for the HIV infected youth. Alcohol dependency is associated with poor adherence to ART therapy (ibid, 2012). This subsequently leads to slow suppression of HIV virus and hence development of drug resistance. This means a quicker disease progression and early deaths for the youth. In addition to this, alcohol use disorders can cause psychiatric conditions in the patients (Kamau et al., 2012).

According to research the maladaptive behaviours that are associated with alcohol use disorders in addition to increasing the risk of depression include; delay in seeking early treatment, initiation into ART, non-treatment compliance and poor outcomes and subsequent high viroload hence risking HIV transmission amongst sexual partners, (Dow et al., 2016; Nduna et al.., 2010). Therefore, the importance of alcohol use screening, detoxification, dependency identification and depression screening among youth in HIV treatment settings and appropriate treatment cannot be ignored. This was confirmed by the study as it demeonstrated prevalence of alcohol use disorder at 12.8% and depression at 76.7%.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

The chapter is presented under the following section: the study site, study design, study population, target group, sampling method / design, sample size, data collection instruments and procedures, ethical consideration and study limitations.

3.1 Study Design

The design was a cross sectional analytical that appled an institutional based survey to study the prevalence of depression and alcohol use disorder among youth aged 15-24 yrs under HIV & AIDS care at a private hospital in Kenya.

3.2 Study Area

The study was conducted at Mater Misericordiae Hospital. The Hospital is a faith based Catholic Mission Institute located in Nairobi Kenya and provides HIV care, treatment and support services through its two clinics: The Mater Total Care Clinic (MTCC) and Mater Comprehensive Care Clinic (MCCC).

MTCC provides its HIV care services at consultancy package with an affordable tariff. Comprehensive Care Clinic however is an initiative of MMH and Sisters of Mercy Kenya under their arm of charity.

The MCCC was established in 2006 with the support of the sisters of Mercy, MMH and USAID through AIDS Relief Service. It offers a whole range of HIV care including Nutrition,

Counseling, Pharmaceutical Care, PMTCT, community outreach services, Laboratory diagnosis and monitoring to both adults and children. Daily attendance of patients ranges from 100 to 150. MMH is one of the oldest Catholic Mission hospitals in the country having been founded in 1962 by founding sisters of Mercy with a prime focus to provide best affordable health care for the Natives. It is currently the largest Faith Based Level Six B Teaching and Referral Hospital.

In October 2006 with funding from AIDS Relief, the Mater Comprehensive Care Clinic (MCCC) was started with 80 patients transferred from St Mary's Hospital and was later seamlessly transitioned to consortium of Christian Health Association of Kenya (CHAK) in 2012 who are currently the main Donor. The foundation was in an effort to extend services and elevate the burden of HIV/AIDS within the informal settlement of Mukuru.

The MCCC which is a non-profit charity offers free HIV/AIDS care and management, Nutritional support and training programs. The youth are provided for these services on particular clinic days and support groups. The teen group who comprises of youth aged between 15 to 24 years old comes for their clinic days on every last Friday of every month where they receive their ARTs. Their support group meeting takes place on the last Saturday of every month. However, some of the youth attend clinic on unassigned days. The services offered are provided by multidiscipline team: medical & clinical officers, nurses, counselors, nutritionist, social workers, pharmacists, lab tech, and mentors.

3.3 Study Population

The study population was urban youth under care of HIV/AIDS. The targeted population however, was youth aged between 15 to 24 years under care for HIV/AIDS at Mater Misericordiae Hospital. The program supports a total population of 3,573 active clients on care

(2345 females and 1228 males), 80% are from the Mukuru Slums where the burden of HIV/AIDS is very high. Among the clients, 218 are HIV exposed babies (0-2 years), 142 children (0-14yrs), 56 adolescent (15-17yrs), 175 youths (18-24yrs) and 3200 clients above 25yrs. These clients are economically challenged with issues of food insecurity, poverty, unemployment, homelessness, gender based violence, stigmatization and illiteracy. Though the clinic offers these services to patients of all ages, the target population for the study is HIV positive youth aged between 15 to 24 years old.

3.4 Inclusion and Exclusion Criteria

3.4.1 Inclusion criteria:

The study targeted:

- All youth more than 15 yrs and less than 24 yrs
- All youth 15-17 who gave assent to participate and whose parents gave consent.
- All youth between 18-24 yrs who gave consent.

3.4.2 Exclusion Criteria:

The exclusion criterion was applied to:

1. All youth less than 15yrs and more than 24 yrs
2. All youth 15-17 yrs who did not assent and whose parents did not consent.
3. Newly diagnosed youth who are awaiting treatment preparation seminars.
4. All youth between 18-24yrs who do not give consent
5. All youth who either were drunk, severely depressed or very sick.

3.5 Sample Size Determination

The general population of patients infected by HIV registered at Mater Misericordiae Hospital Comprehensive Care Clinic is 3573. However; the study focused on youth aged between 15 to 24 years. According to the actual data from MMH CCC, there were 237 youths aged between 15 to 24 years who belonged to adolescent and youth group.

A sample size calculation based on Taro Yamane formula (1967) which was used in other similar studies:

Formula: n=N/1+ N (e) 2

Where: n= signifies the sample size required

N = signifies the population under study

e = signifies the margin error (0.05)

N = 237

1 + 237 (0.05) 2 = 150 youths. This was the minimum possible sample size.

But because it was a small population to improve the power the researcher targeted the entire population of 237 registered youth between 15 years and 24 years.

Table 1: Total target population

Youths Categories	**Total No.**
Youth aged 15 to 17 yrs	59
Youths aged 18 to 24 yrs	178
Total	237

3.6 Sampling Method

Because of the small size of study population, the researcher used survey method using the entire targeted population. The researcher drove youth turn up rate through multiple reminders such as (online: *what's-up group*, bulk SMS and telephone) to achieve the highest possible response rate.

3.6.1 Recruitment and Consenting Procedure

After ethical approval by the KNH-UoN ERC, Mater Misericordiae Hospital and CCC coordinator, the researcher proceeded to CCC. The recruitment process was based on the numbers of youth that came on their assigned clinic days and support groups. As per the records at Mater Misericordiae Comprehensive Care Clinic (MCCC), the number of youth who attend their clinic days and support groups range between one hundred and fifty collectively for both categories. As for the youth who come on non-assigned clinic days on a daily basis, their number range between one to three youth per day and averaging to fifteen per week. This adds up to approximately sixty respondents per month. In order to attain the sample size as required, the researcher targeted and engaged all the youths attending the support and assigned clinic days in the study. The researcher also attended the clinic daily within the data collection month to get the respondents that visit the clinic unscheduled. The researcher engaged any consenting youth aged between 18 to 24 yrs until he attained one hundred and fifty four respondents. The same was done to the 15 to 17 yrs youths which after their parent's assent was obtained, their consent was also sought to fully engage them in the study. This was done until the researcher attained twenty six respondents.

When the researcher entered the CCC, he proceeded to Youth and adolescent desk/ office to meet their coordinator and positioned himself in the space agreed upon by the youth coordinator. With the assistance from youth coordinator in the clinic and initiated by the researcher's request for any patient aged between 15 and 24 yrs were kindly requested to pass by the researcher's desk from which assent and consent explanations and request to participate in the study were given. Every participant in the study was systematically taken through consent form for clarity.

Assent was obtained first for youth aged 15-17 yrs at the youth desk from where every youth passed through unaccompanied. Those who agree to participate in the study were explained to of the need to bring their parent/ guardian for consent. It is a requirement by the clinic that those bellow 17yrs be accompanied by parent/guardian to strengthen treatment compliance. Consent from parent /guardian for youth aged 15-17yrs were either obtained during parents /guardian meetings or in the waiting room as the youth went through triaging. This was to eliminate likelihood of embarrassment when both consent and assent are sought at the same time.

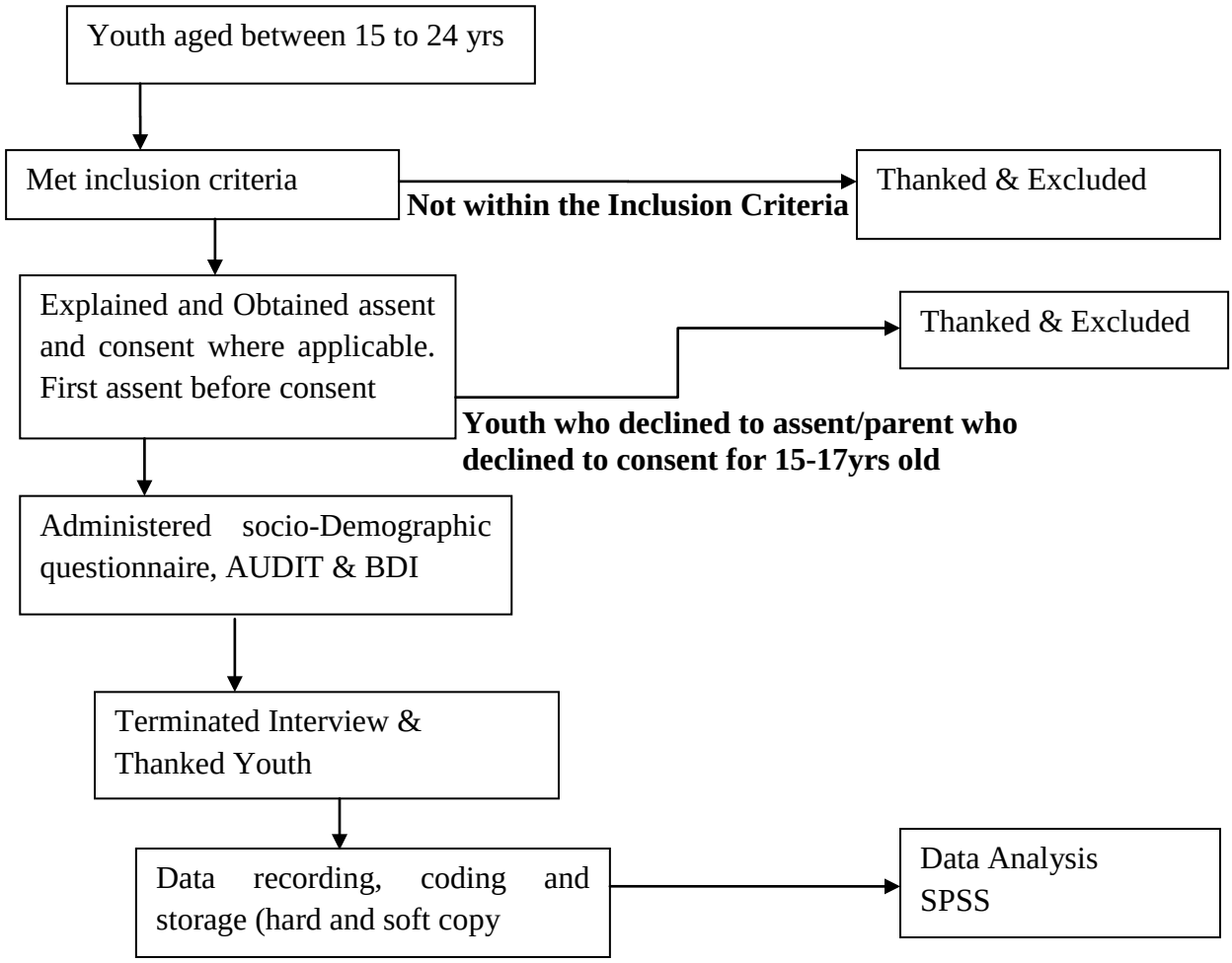
Confidentiality was maintained during the entire consenting process as each youth at a time was treated individually with respect and compassion at youth office where there was privacy and confidentiality. The shared information from each youth during the entire consenting process remained confidential and was treated as a privilege and no one else was expected to know. Those who participate in the research were explained to that those with psychiatric morbidity (alcohol use disorder or depression) were to be contacted for feedback and further treatment (psychotherapy and psychiatric reviews). For youth aged 15-17yrs old, their parents / guardians were to be contacted but with their knowledge and permission as already explained to during the consenting process.

The first contact with youth or parent/ guardian was researcher's introduction, study explanation and request to participate, consent explanation on research study and addressed any need for clarification. Administration of the researcher designed questionnaire and tools of assessment were then administered after receiving consent which was at the second contact. Youth aged 15-24 have their clinic on last Friday of every month and support group on last Saturday of every month. This took care of likelihood of intrusion and emotional distress which could arise if obtaining consent and data collection are conducted almost at the same time. Youths freely filled

in the questionnaires and assessment tools at youth office or at conference room as the two were designated for youth activities and had assured privacy and confidentiality during data collection process.

The research process intended not to interfere with other service delivery in the clinic. Youth coordinator's role strictly was limited to directing youth to the researcher desk. This was after his routine support to the youth. After the respondents successfully filled in the questionnaire, they individually handed them back to the researcher or dropped at the lockable pigeon hole box provided and positioned at youth office from where they were all collected.

Figure 2: Sampling flow chart



3.7 Data collection procedure

The researcher positioned himself at the youth office as provided by the clinic coordinator where all youths aged 15-24ys were directed from the receiption desk as well as any attending service point. The researcher solely administered the study cognizance of possible different layers of vulnerability (economic status and related effects, age, education levels, health and gender. Researcher's familiarity and close proximity to the clinic as a staff in the hospital in addition assisted to address any concerns related to the participants' vulnerability.

From the youth office where recruitment process was done, those who met the sudy inclusion criteria and agreed to participate in the sudy were taken through study explaination, consent explanation followed by obtaining their consent and assent. Once consented, the researcher administered the socio demographic questionnaire and the two instruments that is; AUDIT and BDI. Two venues for filling up the questionnaires were provided; those who wished to fill these tools at the youth office were allowed as the clinic conference room.

The researcher provided personal contacts to ease any support or clarification in case. This procedure applied to all participants. For youth aged 15-17yrs old, their parents / guardians were contacted but with their knowledge and permission as already explained to during the consenting process.

After the respondents successfully filled in the questionnaire, they handed them back to the researcher or dropped at youth desk/ office at locked pigeon hole/ box provided from where they were collected. Only the researcher had the key to the pegion hole/box provided. The researcher also attended the clinic daily within the data collection month to get the respondents that visited the clinic unscheduled. The following questionnaires were used for data collection procedure.

1. Socio-demographic questionnaires
2. Beck's Depression Inventory
3. Alcohol Use Disorders Identification Test

Each questionnaire had the clinic code number of the participant (the sole purpose of having the code was to enable the researcher (only) to provide necessary intervention e.g. referral if need be and to ensure confidentiality.

After data entry and analysis all those patients identified with symptoms of alcohol use disorder and depression were recalled and referred for further treatment.

3.8 Data collection Instruments

Data collection instruments used were BDI, AUDIT and social demographic questionnare.

3.8.1 Socio demographic questionnaire

This was a researcher developed questionnaire that measured social demographic data like age, gender, educational level, residence, level of income, marital status and religion.

3.8.2 The AUDIT (Alcohol Use Disorders Identification Test)

Finally the AUDIT [Alcohol Use Disorders Identification Test] which is a 10 question tool developed by the WHO helped to identify youth at risk of having alcohol use problems or disorders. The responses given by respondents for question 1-10 were scored between 1 to 4 points which were then added up to determine if the individual had alcohol use disorder. A total score of 8 or more indicated harmful drinking behavior.

3.8.3 The Beck Depression Inventory (BDI)

The Beck Depression Inventory (BDI) tool is a 21-item; inventory that is self-reporting rating that measures attitudes and indicators of depression. It takes about 10 minutes to fill. It elicited prevalence of youth with depression under HIV care at the MMH.

3.8.4 Validity and Reliability of Instruments: AUDIT & BDI

Various instruments accross population have been used to measure alcohol use disoreder. According to Ndetei et al., (2009), a study by Bischof and coleagues designed to identify those with alcohol use disorder in two general practices, revealed that AUDIT test was useful in detailing alcohol use and dependency having performed better compared to other tests in adolescents and adults. In his study, other several similar studies accross the world on AUDIT reaffirms its preference in epidemiological studies reassuring its psychometric properties as good having been tested and confirmed. The study further reveal similar high scores of AUDIT validity and reliability in a study conducted in Naigeria and reports the instrument as the preferred instrument to identify alcohol related problems.

A study by Amina et al,. (2017) on adaptation of Beck Depression Inventory (BDI)-II in Kenya and to examine its factorial structure confirms the good psychometric properties of BDI adaption and recomends its use as adequate measure of depressive symptoms with agood factoral structure. Another study by Tusiime et al,. (2015) among HIV infected population demosntartes good psychometric properties with confidence of 95% validating BDI use in assessing depressive symptoms for HIVinfected patients in sub-Saharan Africa.

3.9 Quality Assurance Procedures

To ensure that the quality and integrity of the research is upheld, a pre-survey of the study site was done to know how many youth were on care and how the clinic generally operated in order to ensure it was a possible study site. Piloting was also conducted to determine the limitation that was to be anticipated during actual data collection and how to overcome them and also ensure that the intended tool captured every aspect of the study and appropriateness for the particular target population. Piloting was done by the researcher issuing the questionnaires to a few of the targeted participants; 20 youth participated and filled the questionnaires. These questionnaires were then assessed by the researcher to see if there were any questions that the respondents had issues with or had trouble answering. The researcher was then able to accommodate the changes needed to capture the information needed from the questionnaires.

3.10 Variables

1. Independent/ predictor/ exposure variable: HIV positive youth (15-24yrs).
2. Dependent / outcome variable: alcohol use and depression disorders

3.11 Data Management and Analysis

The collected data was coded and cleaned. Data entry and quantitative statistical analysis was used (Statistical Package for Social Sciences (SPSS) version 21) as follows: New variables were created using the commands Transform/ Compute and Transform/Record without altering the old variables so as to avoid confusing old variables and the created new variables. The researcher used the Transform/Compute command, to create a new variable for:

- Depression outcome severity levels in the study based conditionally on scores of Beck's Depression Inventory; this was transformed and recorded as a new variable that produced a

desirable table categorizing depression according to the severity i.e. mild, moderate and severe.

- Alcohol Use Disorders Identification Test (AUDIT) using Transform/Compute command was created and set into scores: 0-7 (low risk), 8-15 (risky or hazardous level), 16-19 (high risk or harmful level), and 20 and above (high risk with certainty of dependence).
- The moderating variables using Transform/Compute command was created and each of these new variables re-recorded to produce desirable tables that categorize data sets.

Prevalence of the alcohol use and depression disorders was measured using simple proportions. Socio demographic data of the respondents were represented in frequency and tables.

Pearson correlation table were used to show the association between socio-demographic factors and alcohol use disorder and depression among the HIV infected youth.

3.12 Data Storage

The researcher remained in custody of data (questionnaires) and will only destroy them after 5years.

3.13 Dissemination of Findings

The researcher upon conclusion of the study provided a copy of findings to Mater Misericordiae Hospital Standards and Ethical Committee for inclusion in their inventory. A summarized copy of findings was provided to MCCC program coordinator for her action. She was systematically taken through the research findings and any clarification addressed. Feedback following AUDIT and Beck's depression inventory was provided and youth above 18years contacted in case for further treatment (psychotherapy and psychiatric assessment). Those below 18years, their parents

were involved /contacted for purposes of treatment support as explained to during consent /assent procedure. Confidentiality was strictly maintained along this process and where necessary the support of youth coordinator was sought.

3.14 Ethical Requirements

The research process began by obtaining approval from the Department of Psychiatry, University of Nairobi, and KNH-UoN ERC, and lastly Mater Misericordiae Hospital's Ethical Review Committee.

The procedures and the objectives of the study were explained to MMH, MCCC, MTCC staff and the patients at the clinic. Explanation to the Head of the CCC and youth coordinator facilitated respondents' participation like requesting youth aged 15-24 yrs to go to the youth office from where the researcher explained to the respondent everything concerning the research and requested his/her informed consent. For youth aged between 15 and 17 years, consent from their parents or guardians were obtained first, and then their assent sought out in order for them to participate in the study.

Those who agreed were assured of confidentiality and anonymity because no name was to be recorded anywhere on the tools but instead coded. Researcher provided personal contacts to improve communication when need be and all collected data were zipped and stored under lock and key cupboard before commencing analysis. The researcher did not use any incentives such as money but provided free psychotherapy and organized for psychiatric reviews to those with substance addiction and depressive symptoms. However the researcher provided some refreshments in form of tea with bans.

The details of the ethical considerations were laid down in the letter of consent namely: consent explanation, confidentiality, personal and general benefits, risk and right not to participate and right to withdraw anytime explained to the respondents.

3.15 Study Limitations

The study was done among urban based youth hence the procedure of collecting the data may not allow for the findings to be generalized to the general non-urban population.

CHAPTER 4: RESULTS

4.1 Introduction

This chapter entails the analysis of the data collected. The results are presented according to the study objectives which were to determine the prevalence and severity of depression and alcohol use disorders among the youth under HIV care, to determine the association between depression and alcohol use disorders in the study population and to determine socio-demographic factors associated with either or both alcohol use disorders and depression among youth under care for HIV/AIDS. The data was analyzed using descriptive statistics and presented in various frequency tables. The results presented are pegged on the following research questions:

1. What is the prevalence of depression disorder in HIV/AIDS infected youth?
2. What is the prevalence of alcohol use disorder in HIV/AIDS infected youth?
3. What are the social demographic factors associated with either or both alcohol use disorders and depression among youth under care for HIV/AIDS?
4. Is there relationship between depression, alcohol use disorder and socio-demographic characteristics among the HIV infected youth?

4.2 Response Rate

The target population for the study was two hundred and thirty seven respondents. Upon arrival the researcher discovered that only 194 youth were available for study. 14 had transferred to other facilities, 10 were lost to follow up, 9 had turned 25 yrs old and therefore excluded from study, 6 were newly diagnosed and did not meet the inclusion criteria, 2 were critically unstable

and 2 had died. The researcher however, managed to engage one hundred and eighty respondents in the study; therefore, the response rate was slightly above ninety two percent (92.78%).

4.3 Socio-demographic Factors

The number of male respondents was 56 thus 31% of the total study population. The remaining 69% of the population were female. Also illustrated is socio- demographic factor for this study; age as shown in the table 2, 14.4% of the respondents were between the age of 15 to 17 years while 85.6% of the respondents were between the age of 18 to 24years.

Table 2: Respondents Socio-demographic Profile

	FREQUENCY	PERCENT
GENDER		
Male	56	31.1%
Female	124	68.9%
AGE		
15-17	26	14.4%
18-24	154	85.6%
MARITAL STATUS		
Single	115	63.9%
In relationship	61	33.9%
Co-habiting	4	2.2%
LEVEL OF EDUCATION		
University	15	8.3%
Tertiary College	54	30.0%
Secondary School	95	52.8%
Primary School	16	8.9%
OCCUPATION		
Employed	7	3.9%
Self Employed	20	11.1%
Unemployed	47	26.1%
Student	106	58.9%
INCOME		
No income	154	85.6%
Ksh. 1-10,000	7	3.9%
Ksh. 10,001-25000	13	7.2%
Ksh. 25001-40000	6	3.3%

RESIDENCE		
Flat/Home/Mansionnet	122	67.8%
Informal settlement	58	32.2%
LIVING ARRANGEMENTS		
Alone	22	12.2%
Parents	141	78.3%
Siblings	6	3.3%
Partners/spouse	2	1.1%
Friends	9	5.0%
RELIGION Catholic	56	31.1%
Protestant	116	64.4%
Muslim	4	2.2%
African Traditional	3	1.7%
Others	1	6%

4.4 Prevalence of Alcohol Use among the HIV Infected Youth

To determine the level of alcohol the respondents used; the AUDIT was used to score whether they had a problem with alcohol use or alcohol use disorders. As shown in table 3; most of the respondents (87.2%) were at low risk level with scores between 0 to 7. 10% were at risky or hazardous level with scores between 8 to 15. 2.2% of the respondents were at high risk and harmful level of alcohol use with scores between 16 to19. Finally, 0.5% of the respondents were at high risk or dependent level of alcohol use. Therefore nearly 13% of the respondents showed clear indications of having alcohol use disorder (Table 3 below) having AUDIT score of >8.

Table 3: Respondents AUDIT Scores Results

AUDIT Scores Results	Alcohol use Disorder	No Alcohol use Disorder	N=180
Low Risk(0-7 Scores)	0 (0%)	157 (87.2%)	157 (87.2%)
Risky And Or Hazardous Level(8-15 Scores)	18 (10.0%)	0 (0%)	18 (10.0%)
High Risk Or Harmful Level(16-19 Scores)	4 (2.2%)	0 (0%)	4 (2.2%)
High Risk Or Dependent(20 or Above Scores)	1 (0.5%)	0 (0%)	1 (0.5%)
TOTAL	**23 (13%)**	**157 (87%)**	**N=180 (100%)**

4.4.1 Association between Alcohol Use Disorder and Socio-Demographic Factors

To determine the association between alcohol use disorder and socio-demographic variables, age, level of education and marital status did not influence alcohol use disorder (Table 4) having a P value of 0.251, 0.859 and 0.483 which is above . 05.

The respondents' Income had a moderately strong direct relationship with alcohol use (Table 4). The higher the incomes level the more alcohol use by the respondents. The probability value was .000 which is less than p. value of .05 thus income level is statistically significant.

Table 4: Association between Alcohol Use Disorder and Socio-Demographic Factors

				Pearson Chi-square (P Value)
Low Risk (0-7), Risky (8-15), High Risk (16-19) and Dependency (20 And Above).				
		AUDIT (8 and above)	**AUDIT (0-7)**	
Genda	Male	5 (9%)	51 (91%)	0.001
	Female	18 (15%)	106 (86%)	
Age	15 -17yrs	1 (4%)	25 (96%)	0.251
	18 - 25yrs	22 (14%)	132 (86%)	
Marital Status	Single	18 (16%)	97 (84%)	0.483
	Married	0 (0%)	0 (0%)	
	In a relationship	5 (8%)	56 (92%)	
	Cohabiting	0 (0%)	4 (100%)	
Education	University	3 (20%)	12 (80%)	0.859
	Tertiary College	20 (37%)	32 (63%)	
	Secondary	0 (0%)	95 (100%)	
	Primary	0 (0%)	16 (100%)	
	None	0 (0%)	0 (0%)	
Occupation	Employed	5 (71%)	2 (29%)	0.000
	Self Employed	10 (50%)	10 (50%)	

	Unemployed	3 (6%)	44 (94%)	
	Student	5 (5%)	101 (95%)	
Income	No Income	4 (3%)	150 (97%)	0.000
	1-10,000	5 (71%)	2 (29%)	
	10,001-25,000	9 (69%)	4 (31%)	
	25,001-40,000	5 (83%)	1 (17%)	
Residence	Flat/home	13 (11%)	109 (89%)	0.207
	Informal settlement	10 (17%)	48 (83%)	

4.5 Prevalence and severity of depression among the HIV Infected Youth

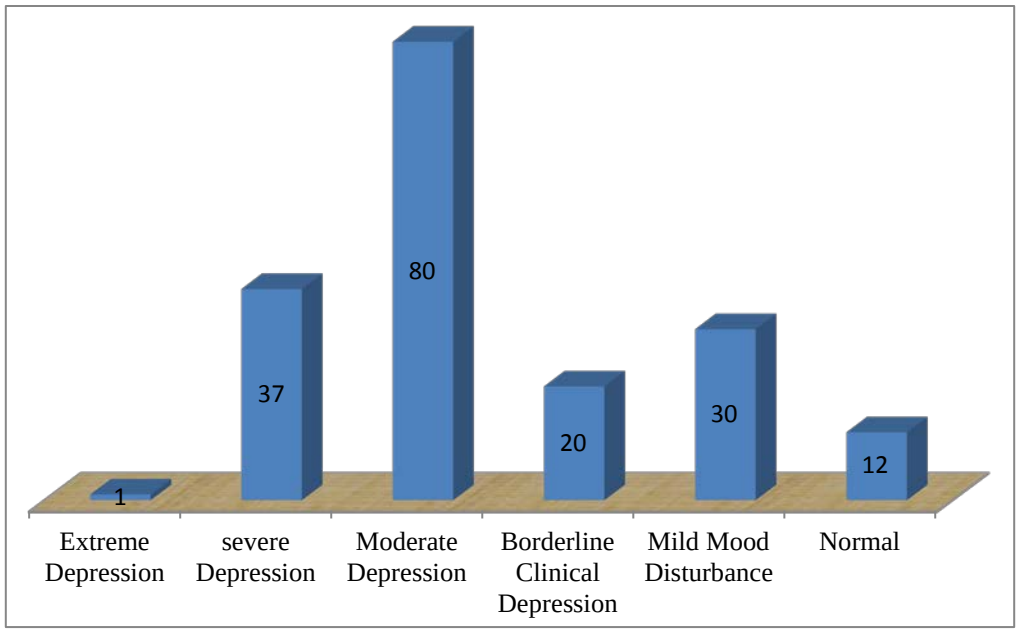
To determine prevalence and severity of depression among the respondents; Beck's Depression Inventory was used. This study sought to find out the prevalence of depression among youth aged 15-24 years old using BDI, a 21-scale item.

The results according to BDI are presented in table 5. From the findings the proportion of respondents with depressive disorder symptoms drawn from borderline clinical depression to extreme depressive symptoms is 76.7% (138). 44.4% (80) of the respondents had moderate levels of depression while 21.1% (38) indicated that they had severe to extreme depression levels.

Table 5: Respondents BDI Scores Results

Depression Level	**Depressed**	**Not Depressed**	**N = 180**
Extreme depression (over 40)	1 (0.7%)	0 (0.0%)	1 (0.6%)
Severe depression (31 - 40)	37 (26.8%)	0 (0.0%)	37 (20.6%)
Moderate depression (21 - 30)	80 (57.97%)	0 (0.0%)	80 (44.4%)
Borderline depression (17 – 20)	20(14.5%)	0 (0.0%)	20 (11.1%)
Mild mood disturbance (11 – 16)	0 (0.0%)	30 (71.0%)	30 (16.7%)
Normal (1-10)	0 (0.0%)	12(28.6%)	12 (6.7%)
TOTAL	**138**(76.7%)	**42**(23.3%)	**180** (100%)

Figure 3: Becks depression inventory (BDI) scores



4.5.1 Association between depression and Socio-Demographic Factors

To determine sociodemographic relationship on depression, age of the respondents played a significant relationship with depression. The Pearson correlation between age and depression was r. = .286 which is a positive moderately weak relationship. This means that the older the respondents were the more depressed they were. The p. value was .000 which is less than .05. Thus age is statistically significant factor to influence depression. However, respondents' occupation, marital status, income, religion, and residence had no statistically significant association with the respondents' depression.

On the respondents' education and depression, the study revealed that education had a correlation of .062 and p. value of .412 thus although education has an association, it has a weak positive relationship.

Table 6: Association between depression and Socio-Demographic Factors

				Pearson Chi-square (P Value)
		No (BDI 0-16)	**Yes (BDI 17 and above**	
Gender	Male	29 (52%)	27 (48%)	0.001
	Female	13(10.5%)	111(89.5%)	
Age	15 -17yrs	25 (96.2%)	1(3.8%)	0.000
	18 - 25yrs	17 (11%)	137 (89%)	
Marital Status	Single	15(13%)	100 (87%)	0.271
	Married	0 (0%)	0 (0%)	
	In a relationship	24 (39%)	37 (61%)	
	Cohabiting	3 (75%)	1(25%)	
	Widowed	0(0%)	0(0%)	
Education	University	13 (87%)	2 (13%)	0.412
	Tertiary College	50 (93%)	4 (7%)	
	Secondary	69 (73%)	26 (27%)	
	Primary	16 (100%)	0 (0%)	
	None	0(0%)	0(0%)	
Occupation	Employed	3 (43%)	4 (57%)	0.910
	Self Employed	10 (50%)	10 (50%)	
	Unemployed	7 (15%)	40 (85%)	
	Student	100 (94%)	6 (6%)	
Income	No Income	77 (50%)	77 (50%)	0.841
	1-10,000	3 (43%)	4 (57%)	
	10,001-25,000	8 (62%)	5 (38%)	
	25,001-40,000	5 (83%)	1 (17%)	
	40,001+	0(0%)	0(0%)	

Figure 4: Corrilation on gender and Depression

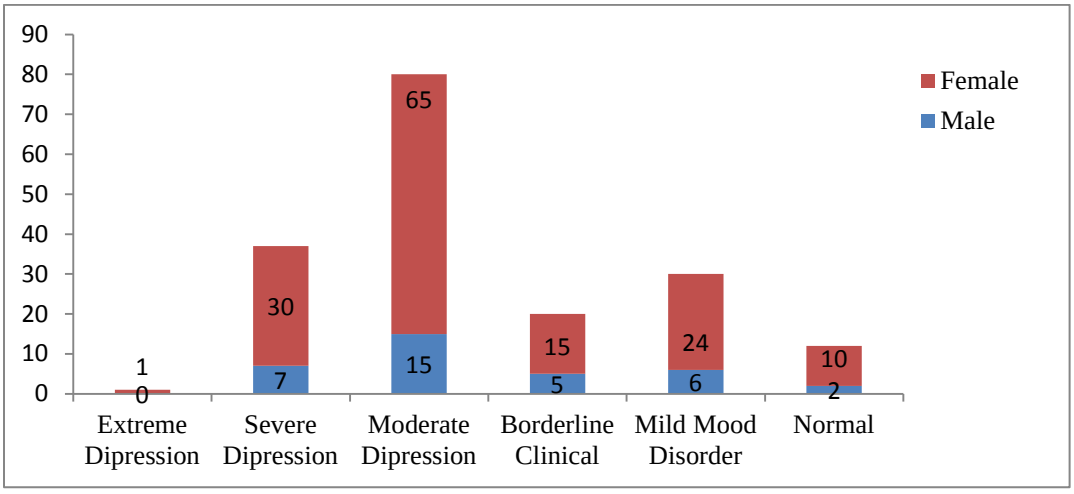


Table 7: Odd Ratio on Alcohol and Depression Association

ALCOHOL	DEPRESSION Yes	No
Yes	**23 (13%)**	**157 (87%)**
No	**138 (77%)**	**42 (23%)**
OR=0.04		

OR= ad/bc =23*42/157*138

OR=0.04

As shown by the findings above, (Table 7), alcohol use disorder was associated with depression at Odd Ratio of 0.04. Youth with depression do not necessarily have alcohol use disorder since 77% of depressed youth had no alcohol use compared to 23% of youth with depression who had alcohol use disorder.

CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Demographic Characteristics

The study identified an association between age and depressive symptoms among youth with HIV. Specifically, age range from 18 to 24 years was significantly associated with depressive symptoms. 89% of youth aged 18-25 is higher compared with 3.8% age range of 15-17 years. This could be probable that age increases the level of understanding and conceptualizing their HIV status as well as entry to adult hood which may be filled with developmental challenges. It might also be that youth experience difficulties coping with HIV since birth, including ongoing treatment and hospitalization which leads to low self-image. A study from Malawi and USA also identified the relationship between increased age and depression (Helina, 2019).

According to Kenya HIV estimates 2018 report, female youth aged 15-24 are more infected than males and this stands at a percentage of 2.61% and thus twice that number of males at a percentage of 1.34% (NACC, 2018). Though these are national statistics, the study equally established a similar situation of more females than males at a possible ratio of 1:2 (56 Males & 124 females).

In addition, most participants were single with the majority having an education of secondary level and above and with no income. This is similar to other local studies done in a similar context by Kiunyu, R.W (2015) and Anne, et al (2017). Kiunyu (2015) found 78% respondents aged 15-24 with secondary level of education and above. Though her 78% is less than 90% in this study, it may be attributed to her study population size of 164 compared to 180 in this study. Ann et al (2017) on the other hand, had 89% of her respondents with no income. Though her 89% is higher than 85% in this study, it could be attributed to her study population size of 273.

Finally socio-demographic factors that were found to have no association with the alcohol use were their religion, residence and living arrangements. This was probably because the respondents were mostly residing in the formal settlement of urban areas and the majority of them were single, living with parents and had probably education; indicating a clear bias in the data.

5.2 Prevalence of Alcohol use disorder in HIV infected youth

The understanding of mental health in a better way is important especially when its assessment and treatment are compounded by other co-morbidities. It is a fact that alcohol use disorder among youth remains a major concern in the public health sector. Though most of the respondents were at low risk level (87%), the 13% with alcohol use disorder still remains high considering the fact that the respondents are not supposed to take any alcohol while using ARVs. According to Kenya national statistics 11.7% youths aged 15-24 use alcohol. This prevalence is not far from the study results at 13% as well as global statistics at 13.6% in 2016, (NACADA, 2012, WHO, 2018). This prevalence is worrying given that alcohol has a direct effect to indidual's cognitive functions as it has been associated with poor adherence to ART (Kalichman, 2012). therefore to ignore this percentage (13%) would be a total blow towards achieving Kenya's HIV vision 2020 strategy of 95-95-95 with only one year left to go.

5.3 Prevalence of Depression in HIV infected youth

Globally depression is number one cause of illness and disability among youth (UNAIDS 2013) and given the established prevalence of 87% based on the Beck inventory scale, an emergency response to arrest the situation is paramount in the country. This rate is higher compared to statistics from other countries as reported through a study done in Ethiopia by Helina, (2019)

where Zimbabwe is at 63% and USA at 52 %. However, the possible reason for this variation might be due to the difference in study design, sample size, and data collection tools as well as a cut off from borderline clinical depression in the AUDIT scores. It might also be related to substance, stigmatization, and low social support.

There was no published work found with a focus on HIV infected youth aged 15-24yrs and the only available statistics are from a study conducted to adult general population with depression scores of 48% (Helina, 2019, Nganga, 2011).

Further still, the existence of depressive disorder among HIV infected people is mostly reported as associated with stigma, source of infection, available support system, socio-economic factors, and education (Helina, 2019, Nduna et al., 2010). It is therefore necessary for another study to be done to a similar population with a prime focus on establishing such confounding and modifying factors since this was not the focus of the study.

5.4 Association between alcohol use, depression and socio-demographic factors among the HIV infected youth.

The HIV epidemic has disproportionately affected the most impoverished regions of the world and among these countries HIV is concentrated in the poor people in society and the marginalized (Helina, 2019, Kamau et al., 2012). The study equally has confirmed this since income and occupation were significantly associated with both alcohol and depression disorder as 77% of depressed respondents had no income and 71% of those with alcohol disorder were employed meaning they could afford to buy the drink or their use disorder could be associated with economic/ financial constraints as a result of less income of Ksh. 1-10,000 and thus likely to suffer mood related disorder (dipression).

Consequently depression and alcohol use disorder have been associated with poor adherence (Kalichman 2012), and the establishment of 13% alcohol use disorder and 77% depression in this study, confirms not just the presence of psychiatric comorbidity but equally revelation of poor ARV adherence among the youth.

As a country that intends to achieve the National HIV Vision 2020 of 95-95-95 that is 95% HIV screening, 95% ARV initiation and 95% drug adherence and viral suppression hence no new infection, the country may require robust measures to address this psychiatric co-morbidity. Similar studies in a public hospital locally done in 2015 to a population of 164 youth aged 15-24 established that 12.2% of youth had high risk to alcohol dependence (Kiunyu, 2015) this is different from the 13% established by the study. The possible reason for this variation might be due to the difference in study design, sample size, and data collection tools as well as AUDIT cut off point of a score of 8 and above. It might also be related to depression, stigmatization, and low social support.

The association between alcohol use disorder and depression disorder had a p value of 0.04 and OR of similar 0.04. Though this association varies from a study by Kuria et al., (2012) which established a statistical association at a P value of 0.002 at admission time and a repeat of P value of 0.02 after six months, the variance can be related to difference in the population size, study context, study design, and the fact that her study population was all adult above 18yrs and with a AUDIT cut off from 13-40 unlike this study's cut off of 8-40.

As to whether there was an association between alcohol use, depression and socio-demographic factors among the HIV infected youth, the study revealed age, gender, income, occupation and education as some of socio-demographic factors on the prevalence of alcohol and depression disorders.

Similar picture has also been noted in a study on prevalence of alcohol use and depression disorders by Kuria et al., (2012) having isolated age and income as key variables.

The study concludes having demonstrated prevalence of psychiatric comorbidity of and an association between depression and alcohol use disorder among HIV/ AIDS youth aged 15-24yrs old.

5.2 Conclusion

HIV-positive young people are suffering from psychiatric comorbidity of mood related (depression) and alcohol use disorder. Importantly this study demonstrates a high prevalence of depressive symptoms among HIV-positive youth attending ART follow-up at a private hospital as well as prevalence of alcohol use disorder. Age, gender, occupation, income and education were found to be independent predictor of depressive symptoms as well alcohol use disorder. Integration of mental health evaluation and treatment into the HIV care provided for youth can be beneficial. More studies to delineate factors associated with comorbid depression and alcohol use disorder among youth with HIV aged 15-24 may add value to the body of knowledge and overall improvement of care.

Also this research fulfills Kenya HIV and AIDS Research Agenda 2014/15-2018/19: *Determine the prevalence and impact of mental health illnesses among PLHIV, Key Populations and Adolescents (disaggregated by age, gender and sub-populations) (behavioural research).*

5.3 Recommendation

First and foremost clinicians need to particularly remain vigilant for all levels of alcohol use and depression in HIV infected patients because even intermittent use can complicate the clinical

management of HIV infected patients by diminishing adherence to medication, increasing risk of hepatic injury, reduces the patient's ability to practice safer sex and increasing the risk of side effects from medication. Therefore there is necessity for mandatory screening for alcohol use or depression disorders or both as part of the treatment program. Counselors and clinicians working at these facilities need supportive training on the use of these psychometric tools.

Another recommendation is that the HIV treatment centers should integrate its treatment approaches and mental health with experts such as psychiatrists and clinical psychologists. This is in line with Comprehensive Mental Health Action Plan 2013–2020, (WHO, 2018).

5.4 Suggestions for Further Studies

One of the limitations of this study was that all the respondents that participated in the study were urban HIV infected youth; it cannot be generalized to the country. Therefore, the researcher suggests that another study can be conducted in the setting where respondents are either from rural or HIV negative to determine the true prevalence in comparison to the urban HIV infected youth.

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APPENDICES

Appendix 1: Work Plan

WORK PLAN 2018	July 2018	October	November	December	January 2019	March	May	July	August	September
Proposal writing	√									
Presentation for approval		√								
Submission to ethical Committee			√							
Sampling of respondents				√						
Piloting of Data Collection Instrument				√						
Finalizing The Instruments					√					
Data Collection						√				
Data Analysis							√	√		
Presentation of The Research Project for Approval									√	
Finalizing The Project and presentation to the Librarian									√	√

Appendix 2: Budget Line

ACTIVITIES	TOTAL COST PER ACTIVITY
Proposal Writing-Sourcing For Material & Books. This includes purchasing of stationery ,food and transport	Kenya Sh. 20,000
Sampling of respondents and Piloting of Data Collection Instrument	Kenya Sh. 20,000
Finalizing The Instruments Which Includes Printing And Photocopying	Kenya Sh. 8,000
Tea with Snack @ sh.100	Kenya Sh. 23100
Data Collection This will be conducted for 30 working days & this includes lunch and travelling costs @ 2500/=daily	Kenya Sh. 50,000
Presentation Of The Research Project for Approval Printing and Photocopying	Kenya Sh. 3,000
Finalizing The Project Presentation to the Librarian	Kenya Sh. 5,000
Ethics & Research Committee Fee	Kenya Sh. 3,000
Mater Misericordiae Hospital Research Fee	Kenya Sh. 5,000
Miscellaneous Expenses Phone Credits etc	Kenya Sh. 15,000
TOTAL COST	Kenya Shillings152,100.

Appendix 3: Sociodemographic Questionnaire: English Version

Instructions: ***Please Tick the Appropriate Answer***

Study No.----------

Date----------

1. Gender

a) Male [ ]
b) Female [ ]

2. Age

a) 15 to 17 yrs [ ]
b) 18 to 25 yrs [ ]

3. Marital Status

a) Single [ ]
b) Married [ ]
c) In a relationship [ ]
d) Co-habiting [ ]
e) Widowed [ ]

4. Level of education

a) University Education [ ]
b) Tertiary College [ ]
c) Secondary School [ ]
d) Primary School [ ]
e) No formal education [ ]

5. What is occupation?

a) Employed [ ]
b) Self Employed [ ]
c) Unemployed [ ]
d) Student [ ]

6. Income

a) No income [ ]
b) 1 to 10,000 Kshs [ ]
c) 10,001 to 25,000 Kshs [ ]
d) 25,001 to 40,000 Kshs [ ]
e) 40,000 Kshs and above [ ]

7. Where do you live?

Please Specify

a) Flat/ home/ Mansionnet areas [ ]
b) Informal settlement areas [ ]

8. With whom do you live with?

a) Alone [ ]
b) With my parents [ ]
c) With my siblings [ ]
d) With my partner/spouse [ ]
e) With friends [ ]

9. Religion:

a) Catholic [ ]
b) Protestant [ ]
c) Muslim [ ]
d) Hindu [ ]
e) African traditional [ ]
f) Others (specify): …….

Appendix 4: Sociodemographic Questionnaire: Kiswahili Version

Numbari lako la kisiri……..

Tarehe.....

Maagizo: Tafadhali Weka Alama Kwenye Jibu Ifaayo

1. Jinsia?
a) Mwanamme [ ]
b) Mwanamke [ ]

2. Umri wako ?
a) Miaka 15 hadi 17 [ ]
b) Miaka 18 hadi 25 [ ]

3. Hali ya ndoa?
a) Sijaoa [ ]
b) Nimeoa [ ]
c) Uhusiano wa kimapenzi [ ]
d) Mjane [ ]

4. Kiwango cha masomo?
a) Chuo kikuu [ ]
b) Chuo cha teknologia [ ]
c) Shule cha upili [ ]
d) Shule ya msingi [ ]
e) Sijasoma [ ]

5. Ni kazi gani unayofanya?
a) Ni kazi ya ajira [ ]
b) Nimejiajiri [ ]
c) Sija ajiriwa [ ]
d) Mimi ni mwanafunzi [ ]

6. Unalipwa au kupata pesa kiasi ngani kila mwezi ?
a) Sipati malipo [ ]
b) Kati ya shilingi elfu 1 hadi 10,000 [ ]
c) Kati ya shilingi elfu 10,001 hadi 25,000 [ ]
d) Kati ya shilingi elfu 25,001 hadi 40,000 [ ]
e) Kati ya shilingi 40,001 au zaidi [ ]

7. Mkaazi yako ni ngani?
Tafadhali fafanua?
a) Naishi jumba letu/ jumba Swahili/ Nyumbani/ kwetu [ ]
b) Naishi makazi duni [ ]

8. Je, kwa makaazi yako unaishi na nani?
a) Naishi peke yangu [ ]
b) Naishi na wazazi [ ]
c) Naishi na ndugu zangu [ ]
d) Naishi na mpenzi wangu [ ]
e) Naishi na rafiki [ ]

9. Unashiriki dini gani?
g) Catoliki [ ]
h) Protestanti [ ]
i) islamu [ ]
j) Hindu [ ]
k) Dini la kiafrika [ ]
l) Tajalingine: …….

Appendix 5: The Alcohol Use Disorders Identification Test (AUDIT) English Version

1. How often do you have a drink containing alcohol?
(0) Never (Skip to Questions 9-10)
(1) Monthly or less
(2) 2 to 4 times a month
(3) 2 to 3 times a week
(4) 4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?

(0) 1 or 2
(1) 3 or 4
(2) 5 or 6
(3) 7, 8, or 9
(4) 10 or more

3. How often do you have six or more drinks on one occasion?

(0) Never
(1) Less than monthly
(2) Monthly
(3) Weekly
(4) Daily or almost daily

4. How often during the last year have you found that you were not able to stop drinking once you had started?

(0) Never
(1) Less than monthly
(2) Monthly
(3) Weekly
(4) Daily or almost daily

5. How often during the last year have you failed to do what was normally expected from you because of drinking?

(0) Never
(1) Less than monthly
(2) Monthly
(3) Weekly
(4) Daily or almost daily

6. How often during the last year have you been unable to remember what happened the night before because you had been drinking?

(0) Never
(1) Less than monthly
(2) Monthly
(3) Weekly
(4) Daily or almost daily

7. How often during the last year have you needed an alcoholic drink first thing in the morning to get yourself going after a night of heavy drinking?

(0) Never
(1) Less than monthly
(2) Monthly
(3) Weekly
(4) Daily or almost daily

8. How often during the last year have you had a feeling of guilt or remorse after drinking?

(0) Never
(1) Less than monthly
(2) Monthly
(3) Weekly
(4) Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?

(0) No
(2) Yes, but not in the last year
(4) Yes, during the last year

10. Has a relative, friend, doctor, or another health professional expressed concern about your drinking or suggested you cut down?

(0) No
(2) Yes, but not in the last year
(4) Yes, during the last year

Appendix 6: The Alcohol Use Disorders Identification Test (AUDIT) - Kiswahili Version

1. Je, ni mara ngapi una kunywa vinywaji ambayo vina pombe?

(0) Sija wahi (ruka hadi swali la 9-10)
(1) Mara Moja Kwa Mwezi Au Hata Mara Chache Zaidi
(2) Mara Mbili Hadi Mara Nne Kwa Mwezi
(3) Mara Mbili Hadi Tatu Kwa Wiki
(4) Mara Nne Au Zaidi Kwa Wiki

2. Ni vinywaji ngapi yanayo pombe unakunywa kwa kawaida? [Kwa siku moja]

(0) Moja au mbili
(1) Tatu au nne
(2) Tano au sita
(3) Saba, nane, au tisa
(4) Kumi au zaidi

3. Ni mara ngapi unakunywa vinywaji 6 au zaidi ya pombe kwa wakati mmoja?

(0) Sija wahi
(1) Mara chache kuliko mara moja kila mwezi
(2) Kila mwezi
(3) Kila wiki
(4) Kila siku au karibu kila siku

4. Ni mara ngapi kwa mwaka uliopita, umejipata kushindwa kusita kunywa pombe kila unapoanza kunywa?

(0) Sija wahi
(1) Mara chache kuliko mara moja kila mwezi
(2) Kila mwezi
(3) Kila wiki
(4) Kila siku au karibu kila siku

5. Ni mara ngapi kwa mwaka uliyopita umejipata ukilegea/ ukishindwa kutimiza majukumu yako kwa sababu ya ulevi?

(0) Sija wahi
(1) Mara chache kuliko mara moja kila mwezi
(2) Kila mwezi
(3) Kila wiki
(4) Kila siku au karibu kila siku

6. Je, ni mara ngapi kwa mwaka huu uliyopita, umejipata umekosa fahamu ya lolote lilicho fanyika usiku uliyo pita kwa sababu ya ulevi?

(0) Sija wahi
(1) Mara chache kuliko mara moja kila mwezi
(2) Kila mwezi
(3) Kila wiki
(4) Kila siku au karibu kila siku

7. Je, ni mara ngapi kwa mwaka huu uliyopita, umejipata ukitamani kunywa pombe asubuhi "kama kifungua macho" iliuweze kuendelea na shughuli zako ?

(0) Sija wahi
(1) Mara chache kuliko mara moja kila mwezi
(2) Kila mwezi
(3) Kila wiki
(4) Kila siku au karibu kila siku

8. Je, ni mara ngapi kwa mwaka uliyopita, umejipata ukihisi huzuni au kuwa na hisia za mtu aliyefanya hatia baada ya kunywa pombe?

(0) Sija wahi
(1) Mara chache kuliko mara moja kila mwezi
(2) Kila mwezi
(3) Kila wiki
(4) Kila siku au karibu kila siku

9. Je, wewe au mtu mwingine amewahi pata majeraha kwa sababu yako kunywa pombe?

(0) Hapana
(2) Ndio, lakini siyo mwaka huu umepita
(4) Ndio, mwaka huu umepita

10. Je, kuna jamaa yako, rafiki, daktari au muhuduma wa afya mwengine ambaye ameonyesha kushangaa na kukunywa pombe yako na hata kuhisia kuwa upunguze kunywa pombe?

(0) Hapana
(2) Ndio, lakini siyo mwaka huu umepita
(4) Ndio, mwaka huu umepita

Appendix 7: Beck's Depression Inventory- mixed English and Kiswahili Version

Swahili version

Chagua jibu sahihi kwenye kikundi kinachoelezea jinsi umekuwa uki jihisi kwa siku chache zilizo pita.

English version

Choose the one statement, from among the group of four statements in each question that best describes how you have been feeling during the past few days. Circle the number beside your choice.

1	1 Sija jihisi vibaya. 0 I do not feel bad. 1 Nina huzuni. 1 I feel sad. 2 Nina huzuni kila wakati. 2 I am sad all the time and I can't snap out of it. 3 Nina huzuni sana na sina furaha. 3 I am so sad or unhappy that I cannot stand it.
2	0 Sijakata tama juu ya maisha yangu. 0 I am not particularly discouraged about the future. 1 Nimeshakata tama juu ya maisha yangu. 1 I feel discouraged about the future. 2 Sina matumaini maishani. 2 I feel I have nothing to look forward to. 3 Sina matumaini maishani na hakuna chochote ambacho naweza kufanya kiwe bora 3 I feel that the future is hopeless and that things cannot improve.
3	1 Siji hisi kuwa sijafaulu. 1 I do not feel like a failure. 2 Nahisi kuwa sijafaulu. 1 I feel I have failed more than the average person.

	3 Nikiangalia maisha yangu naona kuwa sijafaulu maishani mwangu. 2 As I look back on my life, all I can see is a lot of failure. 4 Najiona kama kwamba sitawahi faulu. 3 I feel I am a complete failure as a person.
4	1 Nafurahia maisha yangu jinsi ilivyo. 1 I get as much satisfaction out of things as I used to. 2 Sioni raha kwa mambo ambayo nimekuwa nikiyapenda hapo zamani. 1 I don't enjoy things the way I used to. 3 Sina raha kwa mambo yoyote maishani mwangu. 2 I don't get any real satisfaction out of anything anymore. 4 Hakuna chohote kinacho nifurahisha. 3 I am dissatisfied or bored with everything.
5	1 Sina wasiwasi wowote. 0 I don't feel particularly guilty. 1 I feel guilty a good part of the time. 2 Nina wasiwasi mara kwa mara. 3 Mara nyingi nina wasiwasi. 2 I feel guilty most of the time. 3 I feel guilty all of the time. 3 Kila wakati nina wasiwasi.
6	0 Sidhani nina hukumiwa kwa chochote kile. 1 I don't feel that I am being punished. 2 Nadhani nahukumiwa. 1 I feel I may be punished. 3 Nina tarajia kuhukumiwa. 2 I expect to be punished. 3 I feel I am being punished. 3 Nahisi nikama nahukumiwa.
7	0 Sijilaumu. 0 I don't feel I am worse than anybody else. 2 Najilaumu.

	1 I am critical of myself for my weaknesses or mistakes. 3 Najilaumu kabisa. 2 I am disgusted with myself. 3 I hate myself. 3 Najichukia.
8	1 Sioni kama hali yangu ni mbaya kuliko ya watu wengine. 0 I don't feel I am worse than anybody else. 2 Najilaumu kwa kutokuwa na uwezo wa kujisaidia. 1 I am critical of myself for my weaknesses or mistakes. 2 Najilaumu kila wakati kwa makosa yangu. 3 I blame myself all the time for faults. 3 I blame myself for everything bad that happens. 3 Najulaumu kwa mambo yote mabaya maishani mwangu.
9	0 Sina mafikira ya kujiuwa. 1 I don't have any thoughts of killing myself. 1 Ningependa kujiuwa. 2 I would like to kill myself. 2 Nimewahi kufikiria kujiuwa lakini siwezi jaribu. 3 I have thoughts of killing myself but I would not carry them out. 4 I would kill myself if I had the chance 3 Ningekuwa na uwezo ningejiuwa.
10	0 Mimi si mtu wakulia sana. 1 I don't cry any more than usual. 1 Najikuta nalia sana siku hizi. 2 I cry more now than I used to. 2 Siku hizi nalia kila wakati. 3 I cry all the time now. 3 I would kill myself if I had the chance. 3 Nina weza hata kujiuwa nikiwa na uwezo.
11	0 Sikasirishwi na mambo haraka. 1 I am not more irritated by things than I ever am.

	2 I am slightly more irritated now than usual. 1 Najipata nakasirika mara kwa mara. 2 Huwa nakasirikia wakati mwingi. 3 I am quite annoyed or irritated a good deal of the time. 3 I feel irritated all the time now. 3 Nakasirika kila wakati.
12	0 Napenda kukaa na watu wengine. 1 I have not lost interest in other people. 1 Najipata sina haja na watu kama vile zamani. 2 I am less interested in other people than I used to be. 2 Najipata sina haja kabisa na watu. 3 I have lost most of my interest in other people. 3 I have lost all my interest in other people. 3 Najipata sina haja hata kidogo na watu.
13	0 Niko na uwezo wa kufanya maamuzi. 1 I make decisions about as well as I ever could. 1 Sifanyi maamuzi kwa haraka. 2 I put off making decisions more than I used to. 2 Nina shida ya kufanya maamuzi siku hizi. 3 I have a greater difficulty in making decisions than before. 3 I can't make decisions at all anymore. 3 Najikuta siwezi fanya maamuzi kabisa.
14	0 Naipenda sura na maumbile yangu. 1 I don't feel I look any worse than I used to. 1 Nina wasiwasi na ninajihisi ni kama mimi ni mzee na sura mbaya. 1 I am worried that I am looking old or unattractive. 2 Sipendi maumbile yangu. 2 I feel that there are permanent changes in my appearance that make me look unattractive. 3 I believe that I look ugly. 3 Naamini niko na sura mbaya.
15	0 nina fanya kazi vizuri kama ilivyo kawaida.

	0 I can work about as well as before. 2 Inabidi nisukumwe ili niweze kufanya chochote. 1 It takes an extra effort to get started at doing something. 2 Inabidi nijilazimishe kufanya chochote. 2 I have to push myself very hard to do anything. 3 I can't do any work at all 3 Ninashindwa kufanya kazi kabisa.
16	0 Sina shida ya kulala. 1 I can sleep as well as usual. 1 Ninashindwa kulala kama hapo zamani. 2 I don't sleep as well as I used to. 2 Najipata nina amka usiku kisha nashindwa kurudi kulala. 3 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep. 3 I wake up several hours earlier than I used to and cannot get back to sleep. 3 Nakaa macho usiku wote kisha nashindwa kurudi kulala.
17	0 Sina shida ya kuwa mchovu kila mara. 1 I don't get more tired than usual. 1 Najipata mchovu haraka. 2 I get tired more easily than I used to. 3 Sina nguvu ya kufanya chochote. 2 I get tired from doing almost anything. 3 I am too tired to do anything. 3 Siwezi kufanya chochote.
18	0 Nina hamu ya kula kama kawaida. 0 My appetite is no worse than usual. 2 Sina hamu ya chakula kama hapo zamani. 1 My appetite is not as good as it used to be. 2 Mara nyingi sina hamu ya chakula. 2 My appetite is much worse now. 3 I have no appetite at all anymore. 3 Sina hamu kabisa ya kula.

19	0 sijapunguza uzito. 0 I haven't lost much weight, if any, lately. 1 Nimepoteza zaidi ya kilo tano. 1 I have lost more than five pounds. 2 Nimepoteza zaidi ya kilo kumi. 2 I have lost more than ten pounds. 3 I have lost more than fifteen pounds trying to lose weight. 3 Nimepoteza zaidi ya kilo kumi na tano nikijaribu kupunguza uzito. Score 0 if you have been purposely trying to lose weight.
20	0 sina wasiwasi sana kuhusu afya yangu. 0 I am no more worried about my health than usual. 1 I am worried about my physical problems such as aches and pains or upset stomach. 2 Nina wasiwasi kuhusu maumivu ya tumbo, kichwa na kadhalika. 3 Wasiwasi wangu kuhusu afya yangu inanizuia kufikiria juu ya mambo mengine 4 I am very worried about physical problems and it's hard to think of much else. 3 I am so worried about my physical problems that I cannot think about anything else. 3 wasiwasi wangu kuhusu afya yangu inanizuia kabisa kufikiria juu ya mambo mengine.
21	0 Sijaona tofauti juu ya hali yangu ya mapenzi. 0 I have not noticed any recent change in my interest in sex. 1 Najipata sifikiri juu ya mambo ya mapenzi. 1 I am less interested in sex. 2 I am much less interested in sex. 2 Sina hamu na mambo ya mapenzi. 3 I have lost interest in sex completely. 3 Nimepoteza kabisa hamu ya mapenzi.

Jibu maswali yafuatayo:

1. Je uko na huzuni?
2. Huna hamu ya kufanya mambo ambayo yamekuwa yaki kufurahisha hapo mbeleni?
3. Je umepunguza uzito /ama hamu ya kula?

4. Je unjipata unalala kidogo au unalala sana?
5. Je una jipata mchovu sana?
6. Je unajilaumu, unajihisi kama mtu ambaye hana maana?
7. Hautii maanani kwa chochote unachokifanya?
8. Unafikiria kujiua au umejaribu kujiua?

English

Please specify if you have felt any of the following, how frequently and for what period of time:

1. Depressed mood.
2. Loss of interest or pleasure in usual activities.
3. Significant change in weight and/or appetite.
4. Insomnia or hypersomnia.
5. Psychomotor agitation or retardation.
6. Increased fatigue and loss of energy.
7. Feelings of self-reproach, worthlessness or inappropriate guilt.
8. Slowed thinking or impaired concentration.

Scoring:

Beck Depression Scale:

1-10: These up and downs are considered normal

11-16: Mild mood disturbance

17-20: Borderline clinical depression

21-30: Moderate depression

31-40: Severe depression

Over 40: Extreme depression

Appendix 8: Informed Consent Explanation For Participants who are 18 Yrs and above:

You are being asked to participate in a research study conducted by William Otieno, a clinical psychology student from University of Nairobi. The study is part of a postgraduate thesis. Your participation in this study is voluntary.

Please read the guidelines below and ask any question on what you do not understand, before determining whether or not to participate.

You have been requested to participate in this study because: you are youth at MCCC aged betwenn 15-24yrs. The number of participants required is 231.

Specific Objectives of the Study

a) To determine prevalence of depression among youth under care for HIV/AIDS.

b) To determine prevalence of alcohol use disorder among youth under care for HIV/AIDS.

c) To determine sociodemographic associated with alcohol use disorder and depression among youth under care for HIV/AIDS.

d) To determine the association between depression and alcohol use disorders in the study population.

Procedures

If you volunteer to participate in this study, you will be requested to:

- The data collection instruments that you are required to fill are three but very short ones.
- All of them will take approximately 15 minutes to complete.
- Data collection process of the research will run for 30 working days from its commencement.
- You are allowed to get out of the study at any time by signing a decline consent form.

Potential Risks and Discomforts

No physical or mental injury is expected to occur in this study however all participants will be undergoing continuous individual counseling with a focus on those any arising psychological morbidities such as depression or alcohol use disorder.

Potential Benefits to Subjects and /or to Society

Participants will not financially benefit from participation in this study however potential benefits to the society will include redesigned intervention programs for the future that will address specific needs for youth with alcohol use disorder and depression. Data collected will be useful; the information obtained from this research will act as one of the latest material to stakeholders and will help in policy making with regards to focus on improved care to youth with alcohol use disorder or depression. It will also help in determining the prevalence of youth involvement in alcohol use or with depression while on Antiretroviral Therapy and therefore help in making informed strategies on mitigation among other things.

Confidentiality

Any personal data that is gotten in connection with this study and that can be traced to you will remain private and will be disclosed only with your permission or as required by law. Confidentiality of information will be maintained by means of coding of names and storing all information gathered using a password accessible only to the researcher in the computer. Information gathered will be published in my thesis however names and other personal details that may reveal ones identity will NOT be published

Participation and Withdrawal

You can choose whether or not to be in this study. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind or loss of benefits to which you are otherwise entitled. There is no penalty if you withdraw from the study and you will not lose any benefits to which you are otherwise entitled. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

This research has been approved by KNH/UON/ERC; for any queries contact the Chairperson on Tel. No. +2542726300 Ext 44102. If you have any questions or concerns about this research, you can contact the researcher William Otieno 0725941626.

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study.

Name of participant……..

_____ _____

Signature of participant Date

_____ _____

Signature of researcher Date

Decline/Withdrawal form

I ……... wish to decline/withdraw participation in the study. My reason (s)

……
……

Thank you.

Signature: ……. Date: ……

Appendix 9: Informed Consent Explanation for Participants who are 15-17yrs

You are being asked to participate in a research study conducted by William Otieno, a clinical psychology student from University of Nairobi. The study is part of a postgraduate thesis. Your participation in this study is voluntary.

Please read the guidelines below and ask any question on what you do not understand, before determining whether or not to participate.

You have been requested to participate in this study because: you are youth at MCCC aged betwenn 15-24yrs. The number of participants required is 231.

Specific Objectives of the Study

e) To determine prevalence of depression among youth under care for HIV/AIDS.

f) To determine prevalence of alcohol use disorder among youth under care for HIV/AIDS.

g) To determine sociodemographic associated with alcohol use disorder and depression among youth under care for HIV/AIDS.

h) To determine the association between depression and alcohol use disorders in the study population.

Procedures

If you volunteer to participate in this study, you will be requested to:

- The data collection instruments that you are required to fill are three but very short ones.
- All of them will take approximately 15 minutes to complete.
- Data collection process of the research will run for 30 working days from its commencement.
- You are allowed to get out of the study at any time by signing a decline consent form.

Potential Risks and Discomforts

No physical or mental injury is expected to occur in this study however all participants will be undergoing continuous individual counseling with a focus on those any arising psychological morbidities such as depression or alcohol use disorder.

Potential Benefits to Subjects and /or to Society

Participants will not financially benefit from participation in this study however potential benefits to the society will include redesigned intervention programs for the future that will address specific needs for youth with alcohol use disorder and depression. Data collected will be useful; the information obtained from this research will act as one of the latest material to stakeholders and will help in policy making with regards to focus on improved care to youth with alcohol use disorder or depression. It will also help in determining the prevalence of youth involvement in alcohol use or with depression while on Antiretroviral Therapy and therefore help in making informed strategies on mitigation among other things.

Confidentiality

Any personal data that is gotten in connection with this study and that can be traced to you will remain private and will be disclosed only with your permission or as required by law. Confidentiality of information will be maintained by means of coding of names and storing all information gathered using a password accessible only to the researcher in the computer. Information gathered will be published in my thesis however names and other personal details that may reveal ones identity will NOT be published

Participation and Withdrawal

You can choose whether or not to be in this study. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind or loss of benefits to which you are otherwise entitled. There is no penalty if you withdraw from the study and you will not lose any benefits to which you are otherwise entitled. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

This research has been approved by KNH/UON/ERC; for any queries contact the Chairperson on Tel. No. +2542726300 Ext 44102. If you have any questions or concerns about this research, you can contact the researcher William Otieno 0725941626.

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study.

Name of participant……..

_____ _____

Signature of participant Date

_____ _____

Signature of researcher Date

Decline/Withdrawal form

I ……... wish to decline/withdraw participation in the study. My reason (s)

……
……

Thank you.

Signature: ……. Date: ……

Part A: Informed consent for parents or guardians of participants' 15-17years old

My son, daughter or relative has been invited to participate in the study mentioned and I can confirm that I have not been coerced into giving consent for her/ him to participate in the study. I can also confirm that she/he has not been coerced into giving assent either and has indeed freely agreed to participate in the study willingly and voluntarily and a copy of this Informed consent form has been provided to me.

Print Name of person giving the consent_____

Signature of person giving the consent_____

Date _____

(*Participants who are illiterate should include their thumb print as well)*

Sehemu A: Utoaji idhini /Ridhaa ya wazazi au walezi wa watoto wa miaka 15-17

Mtoto wangu amealikwa kushiriki kwenye masomo ya utafiti. Nathibitisha kwamba kwa ridhaa / hiari yangu bila shuruti / lazimu yeyote namruhusu kushiriki utafiti hi napia nathibitisha kupokea nakala ya fomu hi kama langu binafsi.

Jina langu……..

Sahihi----------

Tarehe……

(wasioweza kusoma na kuandika,waambatanishe alama za kidole gumba)

Appendix 10: Informed Consent Explanation For Participants who are 18 Yrs and above:

Swahili version

Idhini ya kushiriki katika utafiti wa kuchunguza idadi ya wanaotumia pombe au shida ya kiakili ya “depression” kwa vijana wanaoishi na virusi vya Ukimwi wa miaka 15- 24 na wanahudumiwa kwenye kliniki ya wanaoathiriwa na virusi vya ukimwi hospitalini ya Mater Misericordiae jijini Nairobi, Kenya.

Mimi ninaitwa William Otieno mwanafunzi wa chuo kikuu cha Nairobi. Nafanya utafiti kuhusu idadi ya vijana wenye umri kati ya miaka 15-24 wanaoishi na Virusi Vya Ukimwi na huenda wanatumia pombe au wanaugua shida ya kiakili ya “depression” na wanahudumiwa kwenye kliniki ya wanaoathiriwa na virusi (MCCC) hospitalini ya Mater Misericordiae jijini Nairobi, Kenya.

Madhumuni ya utafiti huu

Katika utafiti huu lengo ni kujua:

1. Idadi ya vijana wa miaka 15-24 wanaoishi na virusi vya ukimwi ambao wanashida za kiakili kama“depression.”
2. Idadi ya vijana wa miaka 15-24 wanaoishi na virusi vya ukimwi ambao wanashida ya pombe.
3. Kutafuta sababu za kimazingira na kijamii zinazopelekea vijana wanaoishi na Virusi Vya Ukimwi kuwa na shida za kiakili kama“depression.” na kuwa walevi wa pombe.
4. Kutafuta uhusiano kati ya shida za kiakili kama“depression.” na matumizi ya pombe kwa vijana wanaoishi na Virusi Vya Ukimwi

Usajili wa wateja

Wateja wote wanaotaka kushiriki katika utafiti huu ni lazima wapeane idhini, kwa kutia sahihi. Wale ambao watapeana idhini na wangependa kujiondoa kwenye utafiti wako huru kufanya

hivyo kwa kutia sahihi kwenye fomu ya kujiondoa. Hiyo haimaanishi kuwa watapoteza faida zozote ambazo wangefaidika nayo kama wange endelea na utafiti.

Utunzaji wa siri

Taarifa zote zitatunzwa kwa siri kwa kutumia namba bila kutumia majina kamili ya muhusika.

Madhara na athari

Hakuna madhara yoyote yanayo tegemewa kutokana na ushiriki kwenye utafiti huu.

Uhuru wa kushiriki

Ni hiari kushiriki kwenye utafiti huu na pia unaweza kujitoa wakati wowote. Hata hivyo kutoshiriki au kujitoa kwenye utafiti hakunyimi haki zako za kupata huduma za matibabu. Yeyote atakayejitoa kushiriki katika utafiti akiamua kurudi atapokelewa na kuendelea kupata huduma zote kwa mujibu wa utaratibu uliopo.

Faida za utafiti

Wakati wa utafiti huu utapata nafasi ya kuangaliwa kama una tatizo lolote kuhusiana na matumizi ya pombe au shida ya kiakili ya “depression”. Na watu watakaogunduliwa kwamba wameathiriwa na pombe au shida ya kiakili ya “depression” kwa kiwango kikubwa watapata ushauri au matibabu kwa waatalamu wa kiakili wa hospitali.

Taarifa

Endapo utahitajika kupata maelezo kuhusu haki zako au kutoa taarifa ya madhara ambayo unahisi yametokana na utafiti huu wasiliana na William Otieno, nambari ya simu 0725941626 au mwenyekiti KNH/UON/ERC; nambari ya simu +2542726300 Ext 44102

Je unakubali kushiriki kwenye utafiti?

Ndiyo ☐ Hapana ☐

Sehemu A: Nimeelezewa/nimesoma maelezo haya, nimeelewa na maswali yangu yote yamejibiwa.

Sahihi ya mteja…….

Sahihi ya mtafiti……..

Tarehe ……..

Sehemu B: Fomu la Kujiondoa katika utafiti

Mimi ……... naomba kujiondoa kwenye utafiti huu. Sababu yangu/zangu

……

……..……

……

Ahsante .

Sahihi…… Tarehe……..

Appendix 11 Informed Consent Explanation for Participants who are 15-17 Yrs (Swahili)

Swahili Version

Idhini ya kushiriki katika utafiti wa kuchunguza idadi ya wanaotumia pombe au shida ya kiakili ya “depression” kwa vijana wanaoishi na virusi vya Ukimwi wa miaka 15- 24 na wanahudumiwa kwenye kliniki ya wanaoathiriwa na virusi vya ukimwi hospitalini ya Mater Misericordiae jijini Nairobi, Kenya.

Mimi ninaitwa William Otieno mwanafunzi wa chuo kikuu cha Nairobi. Nafanya utafiti kuhusu idadi ya vijana wenye umri kati ya miaka 15-24 wanaoishi na Virusi Vya Ukimwi na huenda wanatumia pombe au wanaugua shida ya kiakili ya “depression” na wanahudumiwa kwenye kliniki ya wanaoathiriwa na virusi (MCCC) hospitalini ya Mater Misericordiae jijini Nairobi, Kenya.

Madhumuni ya utafiti huu

Katika utafiti huu lengo ni kujua:

1. Idadi ya vijana wa miaka 15-24 wanaoishi na virusi vya ukimwi ambao wanashida za kiakili kama“depression.”
2. Idadi ya vijana wa miaka 15-24 wanaoishi na virusi vya ukimwi ambao wanashida ya pombe.
3. Kutafuta sababu za kimazingira na kijamii zinazopelekea vijana wanaoishi na Virusi Vya Ukimwi kuwa na shida za kiakili kama“depression.” na kuwa walevi wa pombe.
4. Kutafuta uhusiano kati ya shida za kiakili kama“depression.” na matumizi ya pombe kwa vijana wanaoishi na Virusi Vya Ukimwi

Usajili wa wateja

Wateja wote wanaotaka kushiriki katika utafiti huu ni lazima wapeane idhini, kwa kutia sahihi. Wale ambao watapeana idhini na wangependa kujiondoa kwenye utafiti wako huru kufanya hivyo kwa kutia sahihi kwenye fomu ya kujiondoa. Hiyo haimaanishi kuwa watapoteza faida zozote ambazo wangefaidika nayo kama wange endelea na utafiti.

Utunzaji wa siri

Taarifa zote zitatunzwa kwa siri kwa kutumia namba bila kutumia majina kamili ya muhusika.

Madhara na athari

Hakuna madhara yoyote yanayo tegemewa kutokana na ushiriki kwenye utafiti huu.

Uhuru wa kushiriki

Ni hiari kushiriki kwenye utafiti huu na pia unaweza kujitoa wakati wowote. Hata hivyo kutoshiriki au kujitoa kwenye utafiti hakunyimi haki zako za kupata huduma za matibabu. Yeyote atakayejitoa kushiriki katika utafiti akiamua kurudi atapokelewa na kuendelea kupata huduma zote kwa mujibu wa utaratibu uliopo.

Faida za utafiti

Wakati wa utafiti huu utapata nafasi ya kuangaliwa kama una tatizo lolote kuhusiana na matumizi ya pombe au shida ya kiakili ya “depression”. Na watu watakaogunduliwa kwamba wameathiriwa na pombe au shida ya kiakili ya “depression” kwa kiwango kikubwa watapata ushauri au matibabu kwa waatalamu wa kiakili wa hospitali.

Taarifa

Fomu utakazopewa kujaza hazitatumia zaidi ya dakika 15, na utafiti huu utachukua siku 30 tangu siku ya kwanza.

Endapo utahitajika kupata maelezo kuhusu haki zako au kutoa taarifa ya madhara ambayo unahisi yametokana na utafiti huu wasiliana na William Otieno, nambari ya simu 0725941626 au mwenyekiti KNH/UON/ERC; nambari ya simu +2542726300 Ext 44102

Je unakubali kushiriki kwenye utafiti?

Ndiyo ☐ Hapana ☐

Sehemu A: Nimeelezewa/nimesoma maelezo haya, nimeelewa na maswali yangu yote yamejibiwa.

Sahihi ya mteja…….

Sahihi ya mtafiti……..

Tarehe ……..

Sehemu B: Fomu la Kujiondoa katika utafiti

Mimi ……... naomba kujiondoa kwenye utafiti huu. Sababu yangu/zangu

……

……..……

……

Ahsante .

Sahihi…… Tarehe……..