PREVALENCE OF DEPRESSION AND ADHERENCE TO TREATMENT AMONG YOUTH LIVING WITH HIV ATTENDING KENYATTA NATIONAL HOSPITAL COMPREHENSIVE CARE CLINIC (CCC)

BY

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August 2021

DECLARATION

"I, Dr. Faith Muhindi declare this dissertation is my original work and has not been presented for a degree or an academic award at any other learning institution or university"

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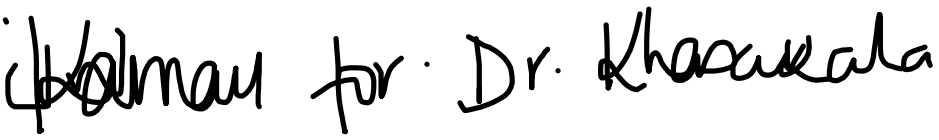
APPROVAL BY SUPERVISORS

"This dissertation has been submitted for examination with our approval as the University Supervisors."



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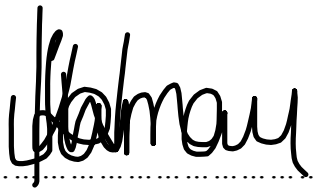

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DEDICATION

To Almighty God, my wisdom and Helper and to my parents and sisters for your enormous support and encouragement in my life. Also to all the young people living with HIV/AIDS, may your lives change for the best as a result of the findings of this research.

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I am also grateful to my friends; Sandra, Judy, Muthoni for your support. God bless you all.

LIST OF ABBREVIATION

CCC	Comprehensive Care Clinic
ART	Antiretroviral Treatment
BSI	Brief Symptom Inventory
HIV	Human Immune deficiency virus
MLR	Multiple Logistic Regression
COMB	Combination Cognitive Behavioral Therapy
TAU	Treatment as usual
CDI	Children's Depression Inventory
KNH	Kenyatta National Hospital
UON	University of Nairobi
ERC	Ethics Research Committee
BDI	Beck Depression Inventory
SPSS	Statistical package for social sciences
HAART	Highly active antiretroviral therapy
NASCOP	National Aids and STI Control Program

OPERATIONAL DEFINITIONS

Major Depressive Disorder

According to the Diagnostic and Statistical Manual Disorders V (DSM V), Major Depressive Disorder (MDD) is defined as having an abnormal mood or a loss of all interests or pleasure which drastically interferes with social, occupation and other important areas of functioning. (American Psychiatric Association, 2013). Additionally, five of the following symptoms must be present during the depressed two weeks: unusual weight loss or a loss of appetite; sleep disturbance, either insomnia or hypersomnia; activity disturbance; a general lack of energy; unusual guilt or self-reproach; trouble concentrating or indecisiveness; and thoughts of death or suicide. Depression cannot be due to physical illness, normal bereavement or bipolar disorder (American Psychiatric Association, 2013).

HIV/AIDS

Human immunodeficiency virus infection and acquired immune deficiency syndrome is a spectrum of condition caused by infection with the human immunodeficiency virus. Following initial infection, a person may not notice any symptoms or may experience a brief period of influenza like illness. Typically, this is followed by a prolonged period with no symptoms. As the infection progresses, it interferes more with the immune system, increasing the risk of common infections, and tumors that rarely affect people who have working immune systems. These late symptoms of infection are referred to AIDS (Longo et al, 2015).

Medication Adherence

Medication adherence is typically defined as a ratio of the number of drug doses taken to the number of doses prescribed over a given period of time.

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ABSTRACT

Background: In HIV/AIDS patients especially youth infected with the illness the most common and highly co-occurring frequent mental disorder is depression.

Aim: This study aimed to assess the prevalence and the social correlates of symptoms of depression among young people living with Human Immunodeficiency Virus attending CCC at Kenyatta National Hospital, Nairobi.

Method: This was a cross-sectional descriptive study, 180 HIV-positive young people from CCC of Kenyatta National Hospital were recruited by random sampling technique. Data was collected using a researcher designed socio-demographic questionnaire and Beck Depression Inventory-II was used to assess symptoms of depression and document the prevalence of depressive disorder. The eight item Morisky Medication Adherence Rating Scale (MMARS) questionnaire was used to estimate drug adherence.

Results: Of the 180 participants 93(51.7%) were male, 42.2% were 17-20years old. The prevalence of depression was 34.4% and majority, 69.4% had mild-moderate depression.73 (40.6%) of the participants had inadequate adherence. There was a significant association between level of adherence and depression. Those with poor adherence had higher odds (OR 1.818) of developing depression than the ones with good adherence. Knowing one's HIV status for less than a year, level of income that was high, and knowing Parents HIV status were all associated with depression.

Conclusion: The study outcome helped in understanding depression associated factors in young people infected with HIV, at KNH CCC. .Routine screen for depression especially among those who have recently known their HIV status or are having issues with adherence is paramount to detect and manage depression at its early onset.

CHAPTER ONE: INTRODUCTION AND BACKGROUND INFORMATION

1.0 Introduction

Worldwide, considerable contributions to the burden of disease are made by mental health problems accounting for approximately 12.3% [1].In 2004 depressive disorders were 3rd in ranking and by 2030 will be leading. DSM-5 features of depression include a low mood, interest loss, energy levels that are low, feeling culpable, disruption in sleep or appetite and concentration that is poor. [3].

Worldwide, the first leading cause of mortality and morbidity is HIV/AIDS which is a chronic infectious disease. Sub-Saharan Africa is having a vast majority of HIV infected young persons (15-24yrs) approximately 5million. [4]. Survival rate of youth infected with HIV perinatally getting antiretroviral treatment (ART) is high (Brady et al.2010) thus contributing to the increasing figures of HIV infected adolescents. HIV/AIDS plays a significant role in the rise of mental disorders. The likelihood of experiencing a mental health disorder is twice in people living with HIV, commonest being depression [2].Unfortunately epidemiological data in this young population is scanty particularly in developing countries. This study is designed to bridge this gap by assessing depression prevalence in young people infected with HIV attending CCC at Kenyatta National Hospital, in Nairobi County, Kenya.

1.1 Background

Mental health particularly for children and adolescents is a neglected global health priority (5).Worldwide, 10-20% of children are affected with disorders of mental health (6). The adolescent period is marked by notable transitions biologically, psychologically, and psychosocially and HIV diagnosis renders it more difficult [7] .Though common worldwide, major depression in young people often is unrecognized. By the end of puberty period, the one year prevalence rate is more than four and after adolescence there is a steep rise in incidence particularly in females. Countries in which the burden is highest include the low and middle income ones. Heightened suicide risk and considerable present and future morbidity is associated with depression. History of depression in the family and psychosocial stress exposure are strongest risks factors for depression in adolescents (8).

HIV/AIDS infected persons have a comorbidity of depression [9]. Among HIV infected young people,major depression was found in 44 % [10].There is a bi-directional relationship between

depression and HIV in that HIV plays a role in causing distress psychologically and inception of disorders of the mind (Mutumba et al., 2016). While depression speeds progression of disease in HIV/AIDS infected people (Maria H Kim et al., 2015). Capturing and managing depression in people infected with HIV/AIDS is crucial as it is leads to poor compliance to antiretroviral medication (Shumba, Atukunda, Imakit, and Memiah, 2013). Depression ranks tops among youth globally as the causal agent for illness and disability. [11]. In 2017, HIV infected youths represented 184,719 (12%) of the overall sum of HIV infected persons in Kenya [12]. In African region, there is paucity of epidemiological data on depression among young people who have the HIV virus.

1.2 Problem Statement

Depression among other mental disorders is especially common globally in HIV-infected people (Gaynes,et al., 2012) with prevalence varying from 22% to 71% (Chikezie,et al.,2013). With 350million persons worldwide affected (WHO 2012), depression rates are approximately **twice** as high in HIV infected persons than the general population (roughly 10% versus 5%). Mental health research in adolescents unfortunately falls considerably behind that of adults in settings with limited resources particularly (Belfer ML 2007).

Of all new HIV cases worldwide, Sub-Saharan Africa roughly accounts for 64% (UNAIDS Data 2017). A major health problem is the mental health of PLWA, though there has been tremendous achievement in other aspects of management including provision of ARV. The HIV prevalence among youths in Sub-Saharan Africa is high therefore it is crucial to comprehend associated factors of depression in youths. Depression, anxiety and stress can affect the risk exposure of HIV together with HIV testing and treatment (Rueda et al., 2016). Sexual practices that are risky are associated with depression (Maria H Kim et al., 2015; Lundberg et al., 2011) and ideas of committing suicide (Rukundo, Mishara, & Kinyanda 2016). Understanding the factors associated with depression in Youth is the first step in depression and HIV treatment cascade. The aim of this study will be to determine the prevalence of depression, depression symptom severity, the social correlates and the level of adherence among young people attending CCC at Kenyatta National Hospital.

1.3 Significance and Justification of the Study

Depression is an important public health issue. It is associated with poor ART compliance and worsens outcomes that are related to HIV (Sikkema et al.2010; Tsai et al.2010; Pence et al 2015). High-income countries have gone into enormous lengths to describe the commonness of mental health challenges in young people infected with HIV/AIDS (Mellins and Malee 2013), however the same cannot be said about low-income countries. Literature remains minimal on the magnitude of this issue in young people in Sub-Saharan Africa. Furthermore, routine screening for symptoms of depression is hardly practiced in majority of clinics of HIV/AIDS patients in Kenya.

The study sought to help clinicians be more aware of YLWH who have a greater risk of developing depression and offer a more focused holistic management. In addition, study findings aim in mitigating the factors associated with depression and thus decrease increase in health care utilization, increase in life quality and good compliance to HIV treatment. Strategies that assimilate Mental Health Care in HIV related programmers might come up as a result of this study. The study has also added to the scarce research data archive as well as opened up fields for further studies. The completion of the research was a necessary requirement for the completion of a master's study.

1.4 Research Questions

These were the study objectives

1. What is the prevalence of depression and depressive symptomatology among young people who are HIV positive attending CCC at Kenyatta National Hospital?
2. What are the social correlates of depression among young people who are HIV positive attending CCC at Kenyatta National Hospital?
3. What is the level of adherence among young people who are HIV positive attending CCC at Kenyatta National Hospital?
4. What is the association between depressive disorder and the social-demographic correlates of depression among young people who are HIV positive attending CCC at Kenyatta National Hospital?

5. What is the correlation between depressive symptoms severity and the level of adherence among young people who are HIV positive attending CCC at Kenyatta National Hospital?

1.5 Research Objectives

1.5.1 General Objective

The purpose of this study was to establish the prevalence of depression, depression symptom severity, the social correlates and level of adherence among HIV positive young people attending CCC at Kenyatta National Hospital.

1.5.2 Specific Objectives

1. To establish the prevalence of depression and severity of depressive symptoms among young people who are HIV positive attending CCC at Kenyatta National Hospital
2. To determine the social correlates of depression among young people who are HIV positive attending CCC at Kenyatta National Hospital.
3. To assess levels of adherence to ART among young people who are HIV positive attending CCC at Kenyatta National Hospital.
4. To assess the association between depressive disorder and the social-demographic correlates of depression among young people who are HIV positive attending CCC at Kenyatta National Hospital.
5. To assess the correlation between depressive symptoms severity and the level of adherence among young people who are HIV positive attending CCC at Kenyatta National Hospital.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The following are studies done on depression prevalence in HIV positive young persons.

2.1.1 Global Perspective

Brown et al., (2012), conducted a research on the prevalence and model of psychological symptoms and relationship between psychological symptoms, route and period of illness, and antiretroviral treatment (ART) among 2032 YLWH (young adults living with HIV) aged 12-24 years, in medical care in the USA. Clinically significant psychological symptoms were reported in 17.5% of the youth. Reported symptoms had no clear pattern. Hostility was as likely to be experienced in youth as was anxiety or depression. Prevalence of clinical symptoms was higher in youth who had not been infected with the virus perinatally but had acquired it through behavioral practice. Those who did not take ART as instructed had a greater prevalence of 10.4% of clinical symptoms. Fewer symptoms were also not observed in those who had divulged that they were HIV positive or had known they had been infected for more than one year.

Brown et al., (2016) conducted a study on effectual management of depression in health centers among 40 participants aged 18-24years. Combination cognitive behavioral therapy and medication management algorithm (COMB) versus treatment as usual (TAU) were put in place. Depressive symptoms were fewer in the COMB group. Symptoms of depression decreased as the viral load lowered in the two categories.

Prevost and Pinto (2016) study on the prevalence of symptoms of depression plus anxiety in 283 and 96 young people who were perinatally infected with HIV and affected with HIV respectively, median age of 16 in England, showed similar findings among the infected and affected persons. High depression scores were associated with the male gender, losing one or both parents to death, self-deprecation, impaired social functioning and history of being excluded from school.

Funck-Brentano et al., (2016) carried out a research in 54 French adolescents aged 14-20 years old who had been infected with HIV perinatally. All the adolescents had been receiving ART for 9 to 11 years and 36 of them had controlled viral load while 46% exhibited psychiatric symptomatology. Factors contributing to psychiatric morbidity included losing a parent to death

and currently worrying about HIV. Protective factors included satisfaction with life and having both parents.

2.1.2 African Perspective

Woollett et al., (2017) identified risks for difficulties in mental health amid 343 adolescents infected with HIV who were 13-19years and were receiving medication in Johannesburg to be the female sex, being hungry, peer violence, being touched inappropriately and being hit. Insecurity at home and in the community were also additional factors. Suicidality was reported in 24% while 27% had symptoms of depression, anxiety or PTSD. Having future dreams and awareness of one's HIV status were protective factors.

Kim, Mazenga and Sharp (2015) study on factors linked to depression in 562 HIV positive adolescents aged 12-18 years in Malawi showed the prevalence of depression to be 18.9 %. A higher score of BDI-II was connected with the feminine gender, few schooling years, household death, not passing an academic term, having a boyfriend /girlfriend, non-disclosure of one's HIV status, immunosuppression that was severe and being bullied for taking medication.

Adefal et al., (2017) study on Psychiatry Morbidity among 196 HIV positive children 6-17years at a Nigerian tertiary health institution postulated that thirty eight (19.4%) had psychiatric disorders (ADHD was found in 4.6% while enuresis, mainly nocturnal enuresis was in 14.8% of the children). Children did not screen positive for depression, anxiety and psychosis. It was also observed that being a single parent, clinical stage of HIV and complications were associated with Psychiatric morbidity.

Abebe et al., (2019) study on prevalence and associated factors of symptoms of depression amidst youth who were Sero-positive, 15-24years, on ART follow up in Ethiopia medical institutions found prevalence of symptoms of depression to be 35.5%. Associated factors included history of opportunistic infection among a certain age range (20-24yrs), medication adherence that was poor, both low and moderate social support, and stigmatization.

Binagwaho, et al (2016) conducted a study comparing validity of the Children's Depression Inventory (CDI) with a structured one in 100 HIV positive aged 7-14 years in Rwanda. A diagnosis of depression was found in 27% of the children. Betancourt et al., (2015) conducted a study to evaluate factors that protect and contribute to the mental health of 683 children aged 10

and 17 years whose HIV exposure were at different levels in Rwanda. Odds of depression were higher in the affected and infected population as compared to the unaffected children.

2.1.3 East Africa Studies

Lwidiko et al., (2018) a Tanzanian study determining the association between status of HIV and depression amid 900 adolescents and children, 7-17years. The general prevalence of symptoms of depression was 12.9%, with 27% and 5.8% in HIV infected and uninfected respectively. Being HIV-positive, living in the countryside, and history of childhood hardship were notably associated with symptoms of depression. Dow et al., (2016) study on the prevalence and gravity of difficulties in mental health and associated consequences among Adolescents living with HIV in Tanzania had 12.1% of participants who scored >-10 on the PHQ9.

Ashaba et al., (2018) conducted a study of adolescents living with HIV in Uganda's countryside estimating the associations between suicidality, depression, internalized stigma and bullying. Major depressive disorder was found among 37(16%) adolescents, suicidality among 30 (13%), and high-risk suicidality in 9(4%). Unlike suicidality which had significant association with both bullying and stigma, major depressive disorder was notably associated with bullying.

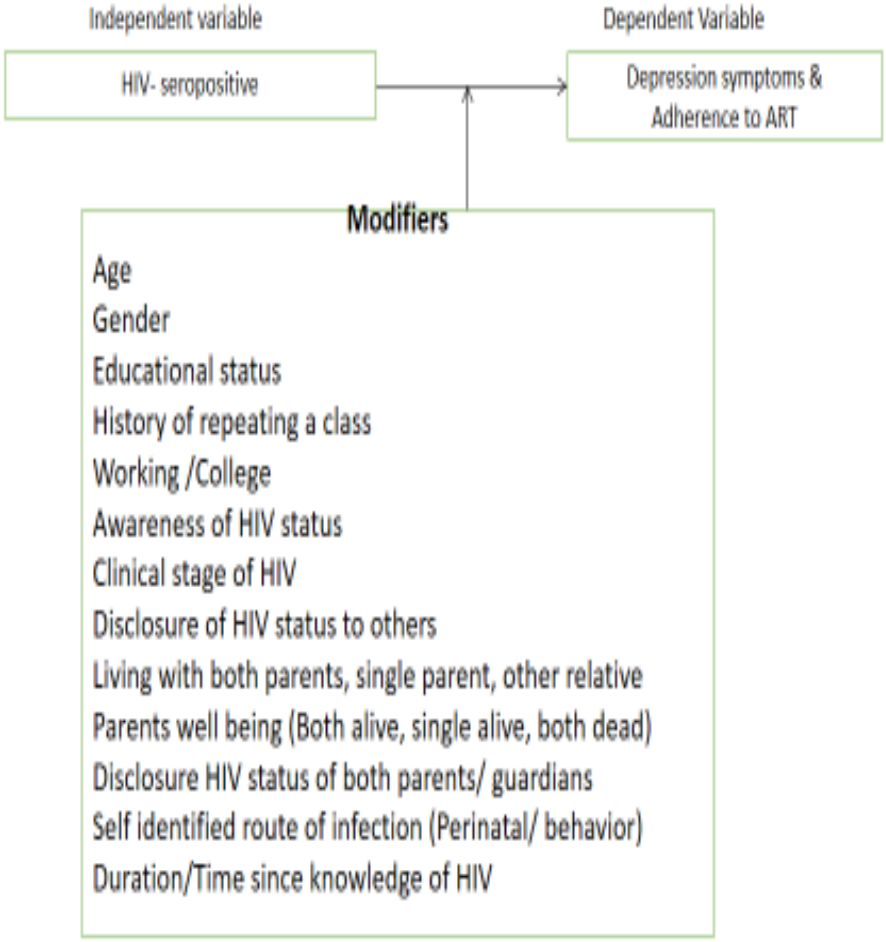
E Kemigisha et al., (2019) study on prevalence of symptoms of depression and associated factors among 336 HIV-positive adolescents 10-19 years in South Western Uganda found 154 (46%) had depressive symptoms. Adolescents who were 15 years, had shared their HIV status with others, took more than 30 minutes to travel for standard care and engaged in sexual practices that were risky had higher odds of being symptomatic for depression on bivariate analysis. Only time of travel of > 30 minutes for standard checkup was associated independently with depression on multiple variable analysis.

Kamau et al., (2012) study in children and adolescents infected with HIV aged 6-18years in a Kenyan urban community with poor resources found that the Major depression (17.8%) was the psychiatric disorders that was most prevalent.

DK Gaitho (2018) study on comprehending mental health challenges and associated consequences psychosocially among 270 adolescents living with HIV aged 10-19 years visiting Kenyatta National Hospital, HIV clinic revealed that 52.6% had symptoms of depression. On univariate analysis, one was likely to have depression if aged 15-19 years, repeated a class,

lacking fees that resulted in one being chased away from the learning institution and history of going without a meal in the preceding 2 weeks. On multivariate analysis being of age's 15-19 years and food insecurity leading to missing of meals were a likelihood of getting depression.

2.2 Conceptual framework



KEY

Modifying Variables portray circumstances whereby the independent variable is likely to bring about the dependent variable. For example being HIV positive and not having both parents alive can lead to depression.

Independent variable which in this study was HIV seropositive, was the expected cause of an outcome being studied. Also known as predictor or explanatory variable.

Dependent variable which was depression in this study was the expected effect of an independent variable in a study. Also known as response or outcome variable.

To study factors associated with depression symptoms the researcher applied the social ecological model as a conceptual framework. The Socio ecological model has frequently been used to study health-related risks factors at the individual, interpersonal, social and structural levels (Sallis, Owen, and Fisher 2015). Depression associated factors that have been drawn at the individual level among ALWHIV include age, gender, level of education, history of repeating a class, being in college/working, awareness of HIV status, clinical stage of HIV, disclosure of HIV status to others, self-identified route of infection, and duration since knowledge of HIV status (Maria H Kim et al., 2015; Osok, Kigamwa, Stoep, Huang,& Kumar, 2018) At the interpersonal level factors that have been outlined are family support e.g. living with both parents, single parent, or other relative, parents well-being, disclosure of HIV status to parents or guardian (Ashaba et al.2018; Maria H Kim et al., 2015; Osok et al.,2018). Using this model in our study, we were able to explore these factors in relation to HIV disease at the individual and interpersonal levels and expound on possible effects of depression that may lead to undesirable health-related or behavioral outcomes, including poor adherence to medication and sexual risk-taking, which may lead to disease progression or transmission that had been described in existing literature (Kim et al., 2017; Lowenthal et al., 2014; Lundberg et al., 2011).

CHAPTER THREE: METHODOLOGY

3.1 Study Design

This study used cross-sectional study design to describe the prevalence of depression among HIV positive young people aged between 13-24 years in KNH CCC.

3.2 Study Area Description

The study site was Kenyatta National Hospital Comprehensive Care Clinic. It's a tertiary public referral medical institution. Situated in Upper Hill vicinity, Nairobi, Kenya's capital city roughly 3.5km west of the city's central business district. This study site was selected because of its accessibility to the researcher hence lowering the budget and transportation cost.

KNH has 16 specialized theatres out of the 24, wards that are 50 in number and out-patient clinics totaling 22 and Accident and Emergency unit. Its private wing has a bed limit of 209 beds of the 1800 hospital bed limit. KNH has over 6000 staff members.

3.3 Study Population

All young people living with HIV aged between 13- 24 years attending CCC in KNH were part of the study**.** The number of young people aged 10-24 enrolled at the KNH-CCC was 970.The number of young people active on HAART for more than 6 months was 933.

3.4 Inclusion criteria

To be eligible, young people had to be

1. Aged between 13- 24 years
2. Living with HIV/AIDS
3. Engaged in care at the Kenyatta National Hospital CCC

3.5 Exclusion Criteria

1. Young people who did not assent and parents who did not consent to the study were excluded from the study.

2. Young people younger than 13 years and older than 24 years did not participate

3. Young people who were not engaged in care at the Kenyatta National Hospital CCC did not participate.

4 .Very sick patients were not enrolled in the study.

3.6 Determination of sample size and formula used

Taro Yamane formula [1967] was used and had been used in other similar studies**.**

Formula $n = \frac{N}{1 + N[e]^2}$

Whereby

n= represents the size of the sample

N= denotes the study population (The number of young people 13-24yrs attending the clinic)

e= indicates the margin of error

$n = \frac{350}{1 + 350[0.05]^2}$

$n = \frac{350}{1 + 350[0.0025]}$

$n = \frac{350}{1.875}$

n= 187 participants

3.7 Sampling Method

This study used systematic random sampling to select participants for the study.

The researcher defined the sampling interval which was as a result of

N/n

Whereby N= population_size

n = sample size

i= 970/187

i= 5.18

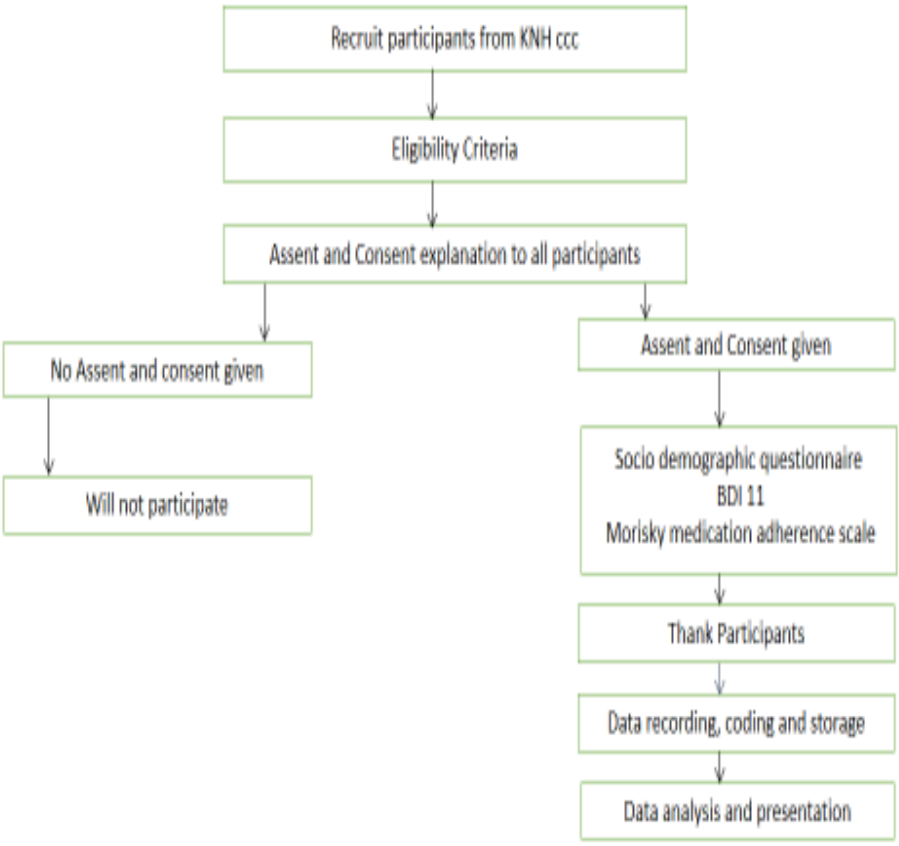
Since the interval number was a fraction, to compensate the researcher had to select every 5th participant then every 6th participant in sequence of their coming from the adult and children's Pharmacy who met the criteria for inclusion until the target was achieved. Consent from youth 18 years and above and consent from parents for youths between 13-17 years who assented to participate was got before participating in the study. Youths between 13-17 who didn't have parental or guardian consent, this included those who came unaccompanied to the clinic and parental consent could not obtained via the phone were exempted from the study.

3.8 Data Collection Procedure

Having Obtained clearance from the Psychiatry department and Kenyatta National Hospital and University of Nairobi Ethics Research Committee (KNH/UON ERC), the researcher visited the CCC in KNH to present site supervisor with written approvals prior to data collection. The CCC operated every day of the week excluding the weekends from 8am to 5pm. The researcher was present every day of the week from 10am to 3pm apart from weeks that the researcher had to be at the work station. Data collection began on the 23rd of March 2021 and ran up to 24th of July 31, 2021. Every 5th and then every 6th participants was selected for the study using the systematic random sampling. Those who were recruited to the study had to comprehend the purpose of the study, its benefits and also the risks associated with the study and assured of confidentiality. Those

who wished to participate on voluntarily grounds were handed an informed assent/consent form to read and agree to, while those who declined were not included in the study and were reassured that refusing to participate would not cause them to suffer any disadvantages. The researcher was present while the participants were completing the forms and questionnaires to offer any required assistance. The researcher then collected all filled questionnaires and thanked the participants. Data collection duration took approximately four months. To ensure safety of the researcher and participants during this period of COVID-19 pandemic precautions such as wearing masks, sanitizing of the hands and checking of body temperature at the entry point and lastly maintaining a distance of 1metre from one participants to the other was adhered to.

Recruitment and consenting procedures sampling flow chart



3.10 Data Collection Instruments

Questionnaires that are structured were used for the study and consisted of four sections to be completed by the participants. First part included the researcher developed socio-demographic questionnaire involving age, gender, education level, awareness of HIV status, who divulged their sHIV status to them, route of HIV infection, have they revealed their HIV status to others, HIV status of both parents.

Secondly, the Beck Depression Inventory-II (BDI-II) instrument was used to access the prevalence and gravity of symptoms of depression. A score ranging from 0-3 is assigned to each of the 4 responses of the 21 questions indicating symptom severity.

This instrument is used to gauge mood, sleep, tiredness, bodily preoccupation, libido loss among other items. Depression severity falls under no, mild-moderate, moderate-severe, severe, and has the following scores 0-9, 10-19, 20-29,>30 respectively.

Ndetei et al., (2010) used the BDI-II tool to access the prevalence of suicidality and depression in adults in Kenya. Averagely the BDI is completed within 5-10 minutes. Medication adherence will be assessed by Morisky eight item Medication Adherence Rating Scale (MMARS). A score of 0 identified patients with good adherence, a score of 1-2 identified those with inadequate adherence while those with a score of 3-8 were identified as the ones with poor adherence as per NASCOP 2016 guidelines. Gabriel Waari et al., (2017) used the MMARS-8 to assess medication adherence among Type 2 Diabetes Mellitus patients. The overall administration time was between 25-30 minutes to complete when self-administered.

3.11 Data Management

Data collected was coded for confidentiality. It was stored in both hard and soft copy. The hard copies were locked securely in a safe cabinet away from public access while the soft copy documents were protected using a password.

3.12 Data Analysis

Completeness along with uniformity was examined from all collected data and recorded into the EPI INFO version 7 and then exported to statistical package for social sciences (SPSS) for windows version 22.0 for examination. The analysis utilized descriptive statistics to measure central tendency and dispersion of the data. Inferential statistics was applied to measure associations utilizing bivariate and multivariate statistics. The results were presented in tables, and bar/pie charts.

3.13 Ethical Considerations

Ethical clearance was obtained from the KNH-Uon ERC. To obtain assent, the researcher first introduced herself to the participant after the parent/guardian has consented for the child to participate in the study after the researcher had read, explained and the parents sought clarification on the consent form. The guardian/parent was not be present during the time of obtaining assent in majority of the participants. The researcher after introducing herself introduced the study, its purpose and its nature to the participant. Thereafter told the participant why he or she had been selected to be in the study. The benefits of the study were explained to the participants, that is, the findings obtained from the study were helpful to parents, guardians, teachers and clinicians gain a better understanding of factors associated with depression among youth living with HIV/AIDS and with the knowledge implement strategies and policy's to curb these factors and lead to increase in quality life and good adherence to antiretroviral therapy. Another benefit was in the event that the researcher found a participant suffering from depression, pharmacotherapy or psychotherapy was administered depending on the severity and be linked to a psychiatric/counsellor clinic for follow-up services. This was made known to the participants. The participant was also be made aware of the risks associated with the study, which included the psychological and emotional distress that may occur as a result of the questions asked. The researcher informed the participant they had the right not to answer the question and be linked to a counsellor for psychosocial support. In obtaining assent and consent it was made clear that the participants will not be paid. The researcher assured the participants that the information they shared would be kept confidential. Confidentiality was maintained by omitting their personal identification. Serial numbers were used. The hard copy data collected was securely locked in a cabinet while soft copies kept in a computer with a password only

known by researcher. After computing of data, all filled research questionnaires would be destroyed. The researcher shared with the participants the telephone number of a contact person in case they had any queries about the study or their rights. It was made clear to the participants that the study was purely voluntarily and even if their parents or guardians had consented, for the ones below 18 years, and they did not want to be in the study it was their choice and not their parents/ guardian that was considered. The option of withdrawing from the study at any given time without the participant suffering ill was made available. After making sure that the participants understood what the study entails, having sought clarification and had agreed to be in the study the researcher had them consent by giving their signature on a document. Written consent was taken from study participants above 18 years. Written assent was obtained from adolescents aged 13-17 years with informed written parental/guardian permission consent.

The team interacting with the youth, the researcher included, balanced the need to give the required support keeping a professional distance so as to not raise unnecessary expectations or foster attachments that could not be sustained. This was the extra-precaution taken to protect the minors and youth in the study.

CHAPTER FOUR

4.0 RESULTS

Introduction

A total of 180 out of 187 enrolled were included in the study making the response rate 96.3%.The findings of the study are presented under the following five major sections:

1: Prevalence of depression and severity of depressive symptoms among HIV positive young people attending CCC.

2: Social correlates of depression among HIV positive young people attending CCC.

3: Level of adherence to ART among HIV positive attending KNH CCC.

4: Association between depressive disorder and the social demographic correlates of depression among HIV positive youth attending CCC.

5: Correlation between depressive symptoms severity and level of adherence among HIV positive young people attending KNH CCC.

Table 4.1: Prevalence of depression and severity of depressive symptoms assessed using BDI among HIV Positive Youth at KNH CCC

Depression	**BDI Score**	**Frequency(n)**	**Percentage**
No depression	0-9	118	65.6%
Depression	10 and above	62	34.4%
Severity of Depression	BDI Score	Frequency (n=62)	Percentage
Mild-Moderate Depression	10-19	43	69.4%
Moderate-Severe Depression	20-29	16	25.8%
Severe Depression	>30	3	4.8%

As shown in Fig.1, more than half (65.6%) of all the participants did not have depression (BDI Score from 0-9).The overall prevalence of depression was 34.4%. Of the 62 depressed HIV positive youth, 43 (69.4%) had mild-moderate depression, 25.8% had moderate-severe depression and 4.8% had severe depression.

Table 4.2: Social-Demographic Correlates of Depression among HIV positive Youth at KNH CCC

The socio-demographic characteristics of the 180 participants are summarized in the table above. 51.7% (n=93) of the 180 participants were males, resulting in a male female ratio of 1.1:1. Most of the participants 42.2% were in the age-group 17-20 yrs. Accumulative proportion of 99.4% had some formal education. Majority (52.2%) had attained secondary school of education, then tertiary (40.0%) and primary (7.2%) education.

Students were the majority of the participants 72.8% (n=131).Most of the youth 33.3% (n=60) lived with both parents while 30% (n=54) lived with a single parent.

52.8% (n=95) were from middle income families with income between 21,000-50,000Kshs per month, which were the majority, 35.6% (n=64) from low and a few 8.9% (n=16) being high income earners, earning over 50,000 Kshs per month.

Perinatally infected youth (n=149) constituted 82.8% of the participants and represented the most common route of infection, this was followed by sexual behavior 6.7% (n=12). 3.9% (n=7) were however not sure how they got infected while 3.3% (n=6) got infected through blood transfusion.

Many of the youths knew they were HIV positive 95% (n=171) and had disclosed their HIV status to others 53.9% (n=97). Most of the participants 91.7% (165) had known their HIV status for a period of more than a year and Clinical Stage 1& 2 was where majority of the participants fell 93.9% (n=169).

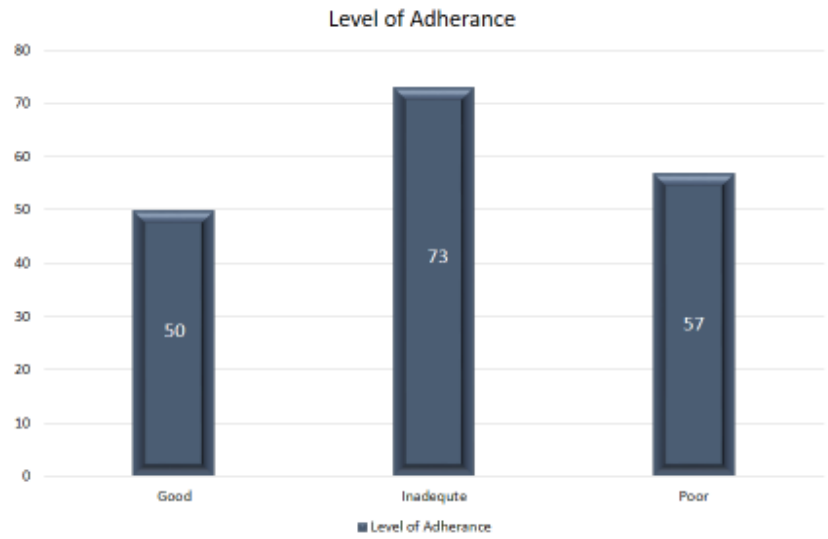
73.9% (n=133) of the youth were informed on their parents HIV status.

Variable		Frequency	%
Gender	Female	87	48.3
	Male	93	51.7
Age	13-16	34	18.9
	17-20	76	42.2
	21-24	70	38.9
Education	Primary	13	7.2
	Secondary	94	52.2
	Tertiary	72	40.0
	No response	1	0.6
Repeating class	Yes	65	36.1
	No	115	63.9
Working status	Student	131	72.8
	Working	48	26.7
	No Resp	1	0.6
Living with	Alone	22	12.2
	Single Par	54	30.0
	Both	60	33.3
	Relative	41	22.8
	No resp	3	1.7
Parents	1 Alive	59	32.8
	Both alive	87	48.3
	Both dead	32	17.8
	No resp	2	1.1

Variable		Frequency	%
Family Income	Low	64	35.6
	Middle	95	52.8
	High	16	8.9
	No Resp	5	2.8
Disclosure status	Yes	171	95
	No	7	3.9
	No resp	2	1.1
Disclosed by	HCW	78	43.3
	Relative/parent	96	53.3
	No Resp	6	3.3
Disclosed to others	Yes	97	53.9
	No	77	42.8
	No resp	6	3.3
Known for	<1y	10	5.6
	>1y	165	91.7
	No Resp		2.8
Infected	Not sure	7	3.9
	Perinatal	149	82.8
	Sex	12	6.7
	Transfusion	6	3.3
	Others	2	1.1
	No resp	4	2.2
Clinical stage	1&2	169	93.9
	3&4	6	3.3
	No resp	5	2.8

Variable		Frequency	%
Parental Status	Aware	133	73.9
	Not Aware	47	26.1

Fig4.1 Level of Adherence to ART among HIV Positive Youth at KNH CCC



The level of adherence among HIV positive youth was assessed using Morisky Medication Adherence Scale 8 (MMAS-8). Of the 180 participants, 73 had inadequate adherence represented by NASCOP 2016 guidelines, MMAS8 score of 1-2, while 57 had poor adherence, score of 3-8 and 50 had good adherence, score of 0.

Table 4.3: Association between depressive disorder and the social-demographic correlates

SD variable		No depression	Mild-moderate	Mod-Severe	Severe	Correlation coefficient	P value
Sex	Female	57	22	8	0	2.962	0.397
	Male	61	21	8	3		
Age	13-16	23	9	2	0	4.678	0.586
	17-20	47	22	6	1		
	21-24	48	12	8	2		
Education	Primary	8	3	2	0	7.541	0.581
	Secondary	56	29	8	1		
	Tertiary	53	11	6	2		
	No response	1	0	0	0		
Repeating class	Yes	41	15	7	2	1.742	0.628
	No	77	28	9	1		
Working status	Student	85	32	12	2	0.671	0.995
	Working	32	11	4	1		
	No Response	1	0	0	0		
Living with	Alone	15	4	3	0	4.005	0.983
	Single Par	36	13	4	1		
	Both	40	14	5	1		
	Relative	24	12	4	1		
	No response	3	0	0	0		
Parents	1 Alive	40	14	3	2	8.964	0.441
	Both alive	60	17	9	1		
	Both dead	16	12	4	0		
	No response	2	0	0	0		
Family Income	Low	40	14	8	2	6.279	**0.042
	Middle	62	26	6	1		
	High	12	3	1	0		
	Unknown	4	0	1	0		
Disclosure status	Yes	111	41	16	3	1.952	0.924
	No	7	2	0	0		

SD variable		No depression	Mild-moderate	Mod-Severe	Severe	Correlation coefficient	P value
Disclosed by	HCW	53	16	8	1	1.911	0.928
	Relative/parent	61	25	8	2		
	No Response	4	2	0	0		
Disclosed to others	Yes	64	25	7	1	2.941	0.816
	No	50	16	9	2		
	No response	4	2	0	0		
Known for	<1y	5	3	1	1	6.095	**0.013
	>1y	110	38	15	2		
	No Response	3	2	0	0		
Infected	Not sure	6	1	0	0	16.950	0.322
	Perinatal	99	37	11	2		
	Sex	7	2	2	1		
	Transfusion	3	1	2	0		
	Others	1	0	1	0		
	No response	2	2	0	0		
Clinical stage	1&2	114	37	16	2	17.187	0.059
	3&4	1	4	0	1		
	No response	3	2	0	0		
Parental status	Aware	31	11	4	1	11.303	**0.037
	Not Aware	87	32	12	2		

As shown in table 4.3 family income was significantly associated with depression at a P Value of 0.042. The odds of developing depression in a multivariate analysis among participants with low income level were 1.925 (OR-1.925) lower than those with high income levels. Knowledge of period of HIV infection was also related with depression at a P value of 0.013. On a multivariate

analysis knowing your HIV status for less than a year was a likelihood of getting depression. Being aware of the HIV status of one's parents was also linked to depression at a P value of 0.037.Odds of depression were higher among those who were aware as compared to those who were not aware.

Table 4.4 Correlation between depressive symptoms severity and the level of adherence among HIV Positive Young People at KNH CCC

	Depression				
Adherence	**No**	**Mild-Moderate**	**Moderate-Severe**	**Severe**	**Total**
Good	42	5	3	0	50
Inadequate	51	16	4	2	73
Poor	25	22	9	1	57
Total	118	43	16	3	180

Among those with no depression most (n=51) still had inadequate adherence. Majority of the participants with mild-moderate (n=22) and moderate-severe (n=9) depression had poor adherence while among the majority (n=2) who had severe depression had a score of 1-2 which signified inadequate adherence as per MMAS-8.

Odds of having depression were 1.8 times higher in participants with poor adherence as compared with the ones with good adherence.

				95% Confidence Interval	
		OR	**Sig.**	**Lower Bound**	**Upper Bound**
Adherence	**Good**	-1.818	.000	-2.718	-.919
	Inadequate	-1.017	.004	-1.714	-.319
	Poor	Ref	.	.	.

Chapter 5

5.0 DISCUSSION

5.1 Prevalence of depression and severity of depressive symptoms among Youth with HIV/AIDS at KNH CCC

Our understanding on the burden of depressive symptoms among Youth living with HIV/AIDS in SSA was enhanced by this study.

The study revealed that the prevalence of depression among young people living with HIV at KNH CCC was 34.4%. The prevalence of mild, moderate and severe depression as measured by the BDI was 69.4%, 25.8% and 4.8% respectively. In a similar study on comprehending mental health challenges and associated consequences among 270 adolescents living with HIV aged 10-19 years visiting KNH CCC, revealed a higher morbidity 52.6% of depressive symptoms (DK Gaitho 2018) the probable reason for this difference might be due to difference in sample size and age-group. Alternatively, our study rates were higher than a similar study on internalized HIV stigma, bullying, major depressive disorder, among HIV positive adolescents in rural Uganda (Ashaba 2018). Prevalence of depression was 16%. Difference in study tools, sample size could be attributable factors to our higher prevalence of depression.

The prevalence of mild, moderate and severe depression as assessed by the BDI was 9.75%, 25.25% and 12.25% respectively (Ng'ang'a 2011). Severity of depression was more in the moderate category as opposed to our study which had majority having mild depression. This could likely be explained in the age group of the patients which were primarily adults.

Similar findings were found in a study done in Congo on association between depressive symptoms and adherence among adolescents living with HIV (MH Ekat 2020).Depressive symptoms were present in 52 (39%) of the 135 participants, 10-19 years old.

A lower level of depressive symptoms (26%) was reported in a Rwandan study on mental health and antiretroviral adherence among youth (n=193) aged 10 and 17 years living with HIV in Rwanda (MCS Fawzi 2016)

Overall, from this study and other similar studies, youths living with HIV have been shown to be prone to depression with the mixed prevalence rates cutting across studies. This is significant as

depression can have negative consequences such as progression of disease, non-adherence to ART and mortality.

5.2 Correlation between depressive symptoms and level of adherence among HIV positive Youth at KNH CCC

Mortality related to HIV among adolescents has over time remained constant despite access to HIV care and treatment (13), poor adherence mainly contributing to this and depression being the cause of the poor adherence (14)

The study also showed that of the 180 participants, 50(27.8%) were adherent to their ART while 73(40.6%) and 57 (31.7%) had inadequate and poor adherence respectively. This was different from a study in Congo, which revealed that 78(58%) were adherent (MH Ekat 2020). This could be due to the study tool used in measuring adherence in both studies.

Our study finding of 57 (31.7%) of the participant showing poor adherence was closely linked to a Rwandan study that showed 37% of youth (n=193) aged between 10 and 17 years in the past one month had missed or refused to take ART. In this Rwandan study odds of having depression were 1.02 times higher in those who were nonadherant.

It was also observed in our study the odds of having depression were 1.818 higher among those with poor adherence as compared to the ones with good adherence. A similar presentation was also observed whereby the prevalence of depressive symptoms was relatively higher in participants who were non-adherent in comparison to those who were adherent (73% vs 33%; PR: 2.20) (MH Ekat 2020).

Abebe et al.,(2019) also found a similar correlation. Associated factors for depression included having medication adherence that was poor. Even though there has been some association between mental health and adherence in some studies, others have demonstrated no relationship (Adeline Nyamathi et al 2012).

With the increase in ART availability, adherence is key for better clinical outcomes. The findings suggest that depression should be considered among the factors associated with ART non-adherence among youth and clinicians ought to always be on the lookout for it.

5:3 Association between depressive disorder and Social-demographic correlates of depression among HIV Positive Youth at KNH CCC

This study revealed that there was a more like hood of developing depression in Patients who had known their HIV status for less than a year compared to their counterparts who had known for more than a year. This was supported by a similar study that demonstrated that < six months since diagnosed with HIV was associated with high prevalence of depression(D Girma 2021).It was argued that this was as a result of reaction adjustment to the recent awareness of one's sero-status, perceived social stigma and discrimination and admit reliance on health care (Bhatia Ret al.,2012)

Teens from America upper-middle class families are more likely to have higher rates of depression, anxiety and substance abuse than their counterparts in other socio-economic status (15)

The study demonstrated that participants who came from families with socio-economic status, over 50,000 Kshs.per month were more likely to be depressed. This was contrary to a study done on comprehending mental health challenges among HIV positive youth, which showed that lack of fees and history of going without a meal had a likelihood of developing depression (DK Gaitho 2018).Depression among the participants from high socio-economic status could be explained lack of resilience in life as a result of privileges accorded to them (Alice G.Walton 2015)

Knowing parent's HIV status was significantly associated with depression in this study. It was not clear why this was so however perinatally infected youth can be expected to blame their parents leading to emotional and behavioral changes. Alternatively, if it's known to a youth that they were vertically infected and the mother dies, it will result in a huge impact on the view the youth have towards HIV. May associate HIV with death which will build up to fear and anxiety (16).They may eventually be forced to take up the role of the adult in the family if the parent is ill or dies. This reversal of roles exposes children to distress causing emotional and behavioral changes.

5.4 Study Limitations

(1) Social desirability bias may have influenced many of the self-reported variables.

(2) Only HIV/AIDS patients attending CCC KNH participated in the study

(3) Youth might not have actually known the socio-economic status of the parents and this could have contributed to biasness in the research findings.

5.5 Strength of the Study

(1)The study is reliable because standardized questionnaires, phrased in the same manner were given to the participants. This ensured consistency.

(2)Members of the sample were chosen randomly ensuring that they were a representative of the population. Therefore the findings of this research can be generalized for this particular age-group.

5.6 What this Study Adds

Findings from this study add to the limited pool of resources concerning Youth living with HIV in SSA. Among the Kenyan Youth, depression has been associated with poor adherence to ARV, knowing one's HIV for less than a year, youth from a high income earning parents and lastly knowing parent's HIV status. These findings will help clinicians be more keen on these targeted population and aggressive in preventing depression. This research has also opened an avenue for a follow-up research on youth from high income families and depression. Last but not the least, it has added to new recommendations which would benefit the Kenyan youth if implemented.

5.7 Conclusion

This study demonstrated a lower prevalence of depression (34.4%) as compared to another similar study. Factors associated with depression included poor adherence to the ART, having known one's HIV status for less than a year ,being aware of one's parent HIV status and earning high income. The study outcome helped in understanding depression associated factors in young people infected with HIV, at KNH CCC. .Routine screen for depression especially among those who have recently known their HIV status or are having issues with adherence is paramount to detect and manage depression at its early onset.

5.7 Recommendation

1: The key to health outcomes that are better is early detection and management. Therefore screening routinely for depression should be integrated in the care package and priority should be given to YLWH who have known the HIV status less than a year and those with poor adherence.

2: We could also borrow a leaf from Siaya County and launch an Adolescent Adherence Mobile App. This app has features that assess mental health at the press of a button, features on Sexual reproductive Health and HIV, a chat room where you remain anonymous, and also a pill reminder system which help adolescences remember to take their medication. It also provides a platform where adolescents can ask questions in a free and open space and get answers to, questions they would never ask their parents/caregivers. It will provide for a wider coverage and hence reach many YLWH.

3: As a motivational platform CCC KNH could introduce video clips about young people's journey with HIV and have become heroes. This could run concurrently with the waiting numbers from the TV screens. This will reduce waiting time and help young people get encouraged especially those who are starting the journey.

4: Additional inputs could be made to the school curriculum on HIV. Apart from learning about the virus and how it is got, lessons on how to treat people with HIV also need to be included. This will involve what to say or what to say and how their negative remarks can affect the well-being of somebody else. This will in the long run reduce the burden of stigma.

5: Additional reward system could be introduced to persons with most improved viral loads. Books that inspire and motivate these young people could be considered.

6. Studies have shown that low socio-economic status is associated with depression. Therefore this study recommends a follow-up study to determine factors associated with depression in YLWH who come from families with high income levels.

6 **Time Schedule**

S/ No	Activity	Sept2019 to Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sept 2020	Jan2021	March 2021	July2021	Aug 2021
1.1	Research proposal and submission												
1.2	Approval by Kenyatta National Hospital Ethics Committee												
1.3	Data Collection												
1.4	Data analysis and report writing												
1.5	Results present												

	ation and submission of report												

Budget

S/No	**Items Description**	**Quantity**	**Cost in Kshs**	**Subtotal in Kshs**
Proposal Development	Proposal copies	6 copies	602	3612
Data Collection	Stationary, printing and photocopy	200	217	43,400
	Transport to research site	30 days	210	6300
Data Entry	Data clerk	1	6,000	6000
Data Analysis	Statistician	1	25,000	25,000
Thesis Write up	Printing Thesis			20,000
Miscellaneous			5000	5000
			Grand Total	109,312/=

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Appendices

Appendix 1: Socio Demographic Questionnaire

Instructions

- Give the correct information
- Tick where appropriate
- Fill in the blank spaces appropriately

Date ……. Study Number…….

1. What is your gender
   (a)Female
   (b)Male
   (c)Transgender
2. What is your age?
   (a) 13-16
   (b) 17-20
   (c) 21-24
3. Level of Education
   (a)None
   (b)Primary
   (c)Secondary
   (d)Tertiary
4. Have you repeated a class
   (a)Yes
   (b)No
5. Are you
   (a)Working

(b) In School

6. Who do you live with

(a)Both parents

(b)Single parent

(c)Other relatives

(d)Alone

7. Parents' well-being

(a)Both alive

(b)Single alive

(c)Both dead

8. What category does your family/your socio economic status fall?

(a)Low income (0-20,000 Kshs per month)

(b)Middle income (21,000-50,000 Kshs per month)

(c)High income (over 50,000 Kshs per month)

9. Has your HIV status been disclosed to you?

(a) Yes

(b) No

10. If yes to question 11.by whom were you disclosed?

(a) Mother

(b) Father

(c) Guardian

(d)Other's-specify

11. If yes to question 11, have you disclosed your HIV status to anyone?

(a) Yes

(b)No

12. How long have you known about your HIV status?

(a)Less than a year

(b)More than a year

13. How do you think you got HIV?

(a)Perinatally- born with it

(b)Behaviorally

(bi)Sex with a man

(bii)Sex with a woman

(biii)Injection drug use

14. Clinical stage of HIV

(a)Stage 1 and 2

(b)Stage 3 and 4

15. Do you know HIV Status of Parents

Mother-(a) Yes

(b) No

Father- (a) Yes

(b)No

Kiambatisho 1: Dodoso ya Demokrasia ya Jamii

Maagizo

 Toa habari sahihi

 Jibu pale inapofaa

 Jaza nafasi zilizo wazi kwa njia sahihi

Tarehe ……. Nambari ya masomo …….

1. Jinsia yako ni nini?

(a) Kike

(b) Mwanaume

(c) Msenge

2. Umri wako ni nini?

(a) 13-16

(b) 17-20

(c) 21-24

3. Kiwango cha elimu

(a) Hakuna

(b) Msingi

(c) Sekondari

(d) Elimu ya juu

4. Umerudia darasa lolote?

(a)Ndio

(b)La

5. Unafanya

(a) Kazi

(b) Bado Shuleni

6. Unaishi na nani?

(a) Wazazi wote wawili

(b) Mzazi mmoja

(c) Jamaa wengine

(d) Pekee yangu

7. Ustawi wa wazazi

(a) Wote hai

(b) Moja hai

(c) Wote wamekufa

8. Wewe/Jamii yako ya kijamii inaanguka katika jamii gani?

(a) Mapato ya chini (Kshs 0-20,000 kwa mwezi)

(b) Mapato ya kati (21,000-50,000 Kshs kwa mwezi)

(c) Mapato ya juu (zaidi ya Kish 50,000 kwa mwezi)

9. Je! Hali yako ya H.I.V imefunuliwa kwako?

(a) Ndio

(b) Hapana

10. Ikiwa ndio swali la 11. Je! Ulifunuliwa nani?

(a) Mama

(b) Baba

(c) Mlezi

(d) Bainisha nyingine

11. Ikiwa ndio swali la 11, je! Umefunulia hali yako ya H.I.V kwa mtu yeyote?

(a) Ndio

(b) Hapana

12. Je! Umejua lini kuhusu hali yako ya H.I.V?

(a) Chini ya mwaka

(b) Zaidi ya mwaka

13. Je! Unafikiria ulipataje H.I.V?

(a) Mzaliwa wa asili nayo

(b) Kuendesha

(bi) Kufanya mapenzi na mwanaume

(bii) Jinsia na mwanamke

(biii) Sindano ya matumizi ya dawa za kulevya

14. Hatua ya kliniki ya H.I.V

(a) Hatua ya 1 na 2

(b) Hatua ya 3 na 4

15.Je unajua Hali ya H.IV ya Wazazi

Mama- (a) Ndio

(b) Hapana

Baba- (a) Ndio

(b) Hapana

Appendix 2: Beck Depression Inventory BDI - II

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully. And then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16

(Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness

0. I do not feel sad.

1. I feel sad much of the time.

2. I am sad all the time.

3. I am so sad or unhappy that I can't stand it.

2. Pessimism

0. I am not discouraged about my future.

1. I feel more discouraged about my future than I used to.

2. I do not expect things to work out for me.

3. I feel my future is hopeless and will only get worse.

3. Past Failure

0. I do not feel like a failure.

1. I have failed more than I should have.

2. As I look back, I see a lot of failures.

3. I feel I am a total failure as a person.

4. Loss of Pleasure

0. I get as much pleasure as I ever did from the things I enjoy.

1. I don't enjoy things as much as I used to.

2. I get very little pleasure from the things I used to enjoy.

3. I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings

0. I don't feel particularly guilty.

1. I feel guilty over many things I have done or should have done.

2. I feel quite guilty most of the time.

3. I feel guilty all of the time.

6. Punishment Feelings

0. I don't feel I am being punished.

1. I feel I may be punished.

2. I expect to be punished.

3. I feel I am being punished.

7. Self-Dislike

0. I feel the same about myself as ever.

1. I have lost confidence in myself.

2. I am disappointed in myself.

3. I dislike myself.

8. Self-Criticalness

0. I don't criticize or blame myself more than usual.

1. I am more critical of myself than I used to be.

2. I criticize myself for all of my faults.

3. I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes

0. I don't have any thoughts of killing myself.

1. I have thoughts of killing myself, but I would not carry them out.

2. I would like to kill myself.

3. I would kill myself if I had the chance.

10. Crying

0. I don't cry any more than I used to.

1. I cry more than I used to.

2. I cry over every little thing.

3. I feel like crying, but I can't.

11. Agitation

0. I am no more restless or wound up than usual.

1. I feel more restless or wound up than usual.

2. I am so restless or agitated, it's hard to stay still.

3. I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest

0. I have not lost interest in other people or activities.

1. I am less interested in other people or things than before.

2. I have lost most of my interest in other people or things.

3. It's hard to get interested in anything.

13. Indecisiveness

0. I make decisions about as well as ever.

1. I find it more difficult to make decisions than usual.

2. I have much greater difficulty in making decisions than I used to.

3. I have trouble making any decisions.

14. Worthlessness

0. I do not feel I am worthless.

1. I don't consider myself as worthwhile and useful as I used to.

2. I feel more worthless as compared to others.

3. I feel utterly worthless.

15. Loss of Energy

0. I have as much energy as ever.

1. I have less energy than I used to have.

2. I don't have enough energy to do very much.

3. I don't have enough energy to do anything.

16. Changes in Sleeping Pattern

0. I have not experienced any change in my sleeping. 1a I sleep somewhat more than usual.

1b I sleep somewhat less than usual.

2a I sleep a lot more than usual.

2b I sleep a lot less than usual.

3a I sleep most of the day.

3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritability

0. I am not more irritable than usual.

1. I am more irritable than usual.

2. I am much more irritable than usual.

3. I am irritable all the time.

18. Changes in Appetite

0. I have not experienced any change in my appetite.

1a My appetite is somewhat less than usual.

1b My appetite is somewhat greater than usual.

2a My appetite is much less than before.

2b My appetite is much greater than usual.

3a I have no appetite at all.

3b I crave food all the time.

19. Concentration Difficulty

0. I can concentrate as well as ever.

1. I can't concentrate as well as usual.

2. it’s hard to keep my mind on anything for very long.

3. I find I can't concentrate on anything.

20. Tiredness or Fatigue

0. I am no more tired or fatigued than usual.

1. I get more tired or fatigued more easily than usual.

2. I am too tired or fatigued to do a lot of the things I used to do.

3. I am too tired or fatigued to do most of the things I used to do

21. Loss of Interest in Sex

0. I have not noticed any recent change in my interest in sex.

1. I am less interested in sex than I used to be.

2. I am much less interested in sex now.

3. I have lost interest in sex completely

Kiambatisho 3: Kipimo cha Unyogovu cha Beck I BDI – II

Maagizo: Dodoso hili lina vikundi 21 vya taarifa. Tafadhali soma kila moja kikundi cha taarifa kwa uangalifu. Na kisha chagua taarifa moja katika kila kikundi bora inaelezea njia ambayo umekuwa ukisikia katika wiki mbili zilizopita, pamoja na leo. Mzunguko nambari kando ya taarifa uliyochagua. Ikiwa taarifa kadhaa kwenye kundi zinaonekana kuomba sawa sawa, zunguka nambari ya juu kwa kikundi hicho. Hakikisha kuwa haufanyi chagua taarifa zaidi ya moja kwa kikundi chochote, pamoja na Bidhaa 16 (Mabadiliko katika Njia ya Kulala) au Bidhaa 18 (Mabadiliko katika Tamaa).

1. Huzuni

0. Sijisikii.

1. Ninahisi huzuni wakati mwingi.

2. Nina huzuni wakati wote.

3. Nina huzuni au hafurahii kwamba naweza kuizima.

2. Matumaini

0. Sikata tamaa juu ya maisha yangu ya baadaye.

1. Ninajisikia tamaa juu ya maisha yangu ya baadaye kuliko zamani.

2. Sitarajii mambo yatanifanyia kazi.

3. Ninahisi hatma yangu haina matumaini na itazidi kuwa mbaya tu.

3. Kushindwa kwa zamani

0. Sijisikii kama mtu aliyeshindwa.

1. Nimeshindwa zaidi ya nilipaswa kuwa nayo.

2. Ninapoangalia nyuma, naona mapungufu mengi.

3. Ninahisi mimi ni mshindwa kabisa kama mtu.

4. Kupoteza hamu

0. Ninafurahi sana kama vile nilivyowahi kufanya kutoka kwa vitu ninavyofurahiya.

1. Sipendi vitu kama vile zamani.

2. Ninafurahiya kidogo kutoka kwa vitu ambavyo nilikuwa nikifurahia.

3. Siwezi kupata radhi yoyote kutoka kwa vitu ambavyo nilikuwa nikifurahia.

5. Kuhisi kwa hatia

0. Sina na hatia.

1. Ninajiona na hatia kwa mambo mengi ambayo nimefanya au nilipaswa kufanya.

2. Ninahisi nina hatia kabisa wakati mwingi.

3. Ninahisi nina hatia wakati wote.

6. Mhemko wa Adhabu

0. Sijisikii nikihisi ninaadhibiwa.

1. Ninahisi naweza kuadhibiwa.

2. Natarajia kuadhibiwa.

3. Ninahisi ninaadhibiwa.

7. Kujichukia

0. Ninahisi sawa juu yangu mwenyewe kama zamani.

1. Nimeshindwa kujiamini.

2. Nimevunjika moyo ndani yangu.

3. Sijipendi.

8. Kujistahi

0. Sijakosoa au kujilaumu zaidi kuliko kawaida.

1. Ninajiuliza zaidi kuliko nilivyokuwa.

2. Ninajikosoa kwa makosa yangu yote.

3. Ninajilaumu kwa kila kitu mbaya kinachotokea.

9. Mawazo ya Kujiua au Matamanio

0. Sina mawazo ya kujiua.

1. Nina mawazo ya kujiua, lakini sikuweza kutekeleza.

Napenda kujiua.

3. Ningejiua ikiwa ningepata nafasi.

10. Kilio

0. Mimi huwa na kulia zaidi kuliko vile zamani.

1.Ninalia zaidi kuliko vile zamani.

2.Ninalia kila kitu kidogo.

3. Ninahisi kama kulia, lakini siwezi

11. Mvutano

0. Sina kupumzika tena au kujeruhiwa kuliko kawaida.

1. Ninahisi kutokuwa na utulivu au kujeruhiwa kuliko kawaida.

2. Sina utulivu wala nimechanganyikiwa, ni ngumu kukaa bado.

3. Sina utulivu au nimechanganyikiwa hadi inabidi niendelee kusonga au kufanya kitu.

12. Kupoteza kwa Riba

0. Sijapoteza hamu na watu wengine au shughuli.

1. Sinavutiwa sana na watu wengine au vitu kuliko hapo awali.

2. Nimepoteza shauku yangu zaidi kwa watu wengine au vitu.

3. Ni ngumu kupata hamu ya kitu chochote.

13. Kujitambua

0. Ninafanya maamuzi juu kama vile zamani.

1. Ninaona kuwa ngumu zaidi kufanya maamuzi kuliko kawaida.

2. Nina ugumu mkubwa zaidi katika kufanya maamuzi kuliko zamani.

3. Nina shida kufanya maamuzi yoyote.

14. Kutokuwa na maana

0. Sijisikii kuwa sina maana.

1. Sijichukui kuwa mwenye thamani na muhimu kama zamani.

2. Ninajiona sina maana zaidi ikilinganishwa na wengine.

3. Ninahisi kabisa sina maana.

15. Kupoteza Nguvu

0. Nina nguvu nyingi kama zamani.

1. Nina nguvu kidogo kuliko nilivyokuwa nazo.

2. Sina huduma ya kutosha kufanya mengi.

3. Sina & nguvu 39 ya kutosha kufanya chochote.

16. Mabadiliko katika Njia ya Kulala

0. Sijapata mabadiliko yoyote ya kulala kwangu. 1a nimelala kiasi zaidi ya kawaida.

1b nimelala kidogo kuliko kawaida.

2a mimi hulala sana kuliko kawaida.

2b nimelala kidogo kuliko kawaida.

3a mimi hulala zaidi ya siku.

3b huamka masaa 1-2 mapema na naweza kurudi # 39.

17. Kuwashwa

0. Sina kukasirika kuliko kawaida.

1. Sina hasira kuliko kawaida.

2. Sina hasira zaidi kuliko kawaida.

3. Sina hasira kila wakati.

18.mabadaliko ya hamu ya kula

0. Sifa za kupatikana kwa mtu mmoja.

1a mtu wangu ni mtu bora zaidi.

1b.

2a mtu wangu ni chakula kikubwa zaidi.

2boresha yangu zaidi ya bora zaidi.

3a sina mahitaji.

3b ninatamani chakula yake eba.

19. Ugumu wa umakini

0. Naweza kujikita kama mbaya.

1. Siwezi & # 39; t kujikita pia kama kawaida.

2 ni habari yangu juu ya kitu cha kuifikia sana.

3. Ninaona siwezi kujikita zaidi kwa kitu cha.

20. Uchovu au Uchovu

0. Sina uchovu zaidi au uchovu kuliko kawaida.

1. Nina uchovu zaidi au uchovu kwa sababu zaidi ya aina.

2 nimechoka sana au nimechoka upya mambo akasimbisa.

3. Nimechoka sana au nimechoka upya mambo mpya juu ya fomu

21. Kupoteza Kuvutiwa na Jinsia

0. gunduagg ya ya 0.

1. Je!

2. Sina msaada sana na sasa.

3. Nafasi yako ya matumizi

Appendix 4: Morisky Medication Adherence Rating Scale

Morisky Medication Adherence Scale (MMAS)

Please answer each question based on your personal experience with your medications. Note that there is not right or wrong answer. (Please **circle** your answer below)

1. Do you sometimes forget to take your medications?	NO	YES
2. People sometimes miss taking their medications for reasons other than forgetting. Thinking over the past two weeks, were there any days when you did not take your medications?	NO	YES
3. Have you ever cut back or stopped taking your medications without telling your doctor, because you felt worse when you took it?	NO	YES
4. When you travel or leave home, do you sometimes forget to bring along your medications?	NO	YES
5. Did you take your medications yesterday?	NO	YES
6. When you feel like your health condition is under control, do you sometimes stop taking you medications?	NO	YES
7. Taking medications every day is a real inconvenience for some people. Do you ever feel hassled about sticking to your treatment plan?	NO	YES

8. How often do you have difficulty remembering to take all your medications?	Never/rarely 4
	Once in a while 3
	Sometimes 2
	Usually 1
	All the time 0

Kiambatisho 5: Kiwango cha Ufuataji wa dawa cha Morisky

<u>Kiwango cha Ufuataji wa Madawa cha Morisky (MMAS)</u>

Tafadhali jibu kila swali kulingana na uzoefu wako wa kibinafsi na dawa zako. Kumbuka kuwa hakuna jibu bora au pia. (Habari duru jibu bako chini chini)

1. Je! Wakati mwingine husahau kumeza dawa? HAPANA NDIO

2. Wakati mwingine watu hawamezi dawa kwa sababu nyingine kuliko kusahau. Ukifikiria juu ya wiki mbili zilizopita, kuna siku haukuchukua dawa zako?

HAPANA NDIO

3. Je umewahi kupunguza au kuacha dawa bila kumwambia

daktari, kwa ajili ulihisi vibaya ulihisi vibaya ulipochukua madawa hayo? HAPANA NDIO

4. Unaposafiri au kutoka nyumba yako, je! Wakati mwingine husahau kubeba

dawa? HAPANA NDIO

5. Je! Ulitumia dawa jana? HAPANA NDIO

6.Unapohisi hali ya mwili wako ni nzuri je! Wakati mwingine wewe huwacha dawa? HAPANA NDIO

7. Kuchukua dawa kila siku ni usumbufu wa kweli kwa watu wengine. Je! Umewahi kuhisi kuhangaika juu ya kushikamana na mpango wako wa matibabu?

HAPANA NDIO

8. Je! Ni mara ngapi una shida kukumbuka kuchukua madawa yako?

Kamwe / mara mara 4

Mara moja kwaching 3

Wakati mwingine 2

Kawaida 1

Kila wakati 0

Appendix 6: Consent explanation Document (English Version)

Title: Prevalence of Depression among Young People living with HIV attending CCC at Kenyatta National Hospital.

Participant Study Identification Number …….

Date …….

Dear Sir/Madam,

Introduction

My name is Dr. Faith Muhindi, a postgraduate student in psychiatry at the University of Nairobi. In collaboration with the University of Nairobi, we are doing a study on the prevalence of depression among youths' living with HIV attending CCC at Kenyatta National Hospital. To achieve this, we need about 186 participants, 13-24years of age. I write to you requesting your participation in this research whereby I will ask questions in form of three types of questionnaires: socio-demographic, Becks Depression Inventory (BDI) and Morisky Medication Scale that will take 30-45 minutes to complete.

Kindly note that:

*Participating in this study is voluntary

*Your acceptance to participate in this study does not stop you from withdrawing from the study at any time.

*If you opt out from the study or decline to participate in it you will not suffer any punishment or any loss of benefits that you are otherwise entitled to receive.

*Your personal details will be kept confidential

*You will not receive any token or monetary benefit by participating in the study.

*In the event you will be found to be having a problem after i analyse the information given, you will be managed and linked to a follow-up clinic.

*The results from this study will help in identifying factors associated with depression in youth living with HIV and the results may help in formulating policies that will help in the control of depression among young people with HIV hence improving quality of life and adherence to antiretroviral therapy.

*Part or whole of this study can be availed to you on request.

*There is no right or wrong answer

*There will be no physically invasive procedure although some of the questions asked maybe psychologically invasive and you are free not to answer such questions and in the event of psychological disturbance, you will be offered psychological support and if adversely affected you will be linked to psychosocial support clinic.

If you have questions about the study that are not answered in the consent information, you are free to ask them. In addition, if you have questions in the future you may contact me or my supervisors on the following address

1. Investigator:

    a. Dr.FaithMuhindi
    Tel: 0728626430
    Email: faithmuhindi@gmail.com

2. Supervisors:
    a. Dr. Lincoln Khasakhala
    Email: khaimbugwa@gmail.com

    b. Dr.Judy Kamau
    Email: judykamau@uonbi.ac.ke

3. Kenyatta National Hospital/University of Nairobi Ethics & Research committee
    P.O Box 19676 - 00202 Nairobi
    Tel: (254 – 020) 2726300-9, Ext. 44355
    Email: uonknh_erc@uonbi.ac.ke

Appendix 7. Consent explanation Document (Swahili Version) **Kiambatisho 6**: **Hati ya maelezo ya idhini (Toleo la Kiingereza)**

Kichwa: Kuenea kwa Unyogovu kati ya Vijana wanaoishi na VVU wanaohudhuria CCC huko Hospitali ya Kitaifa ya Kenyatta.

Nambari ya Kitambulisho cha Mshiriki …….

Tarehe ………….

Mheshimiwa Mpenzi

Utangulizi

Jina langu ni Dk Faith Muhindi, mwanafunzi wa shahada ya kwanza ya magonjwa ya akili katika Chuo Kikuu cha Nairobi. Kwa kushirikiana na Chuo Kikuu cha Nairobi, tunafanya utafiti juu ya kuenea kwa unyogovu kati ya vijana wanaoishi na HIV wanaohudhuria CCC huko Kenyatta Hospitali ya Kitaifa. Ili kufanikisha hili, tunahitaji washiriki wapatao 186, miaka 13-24. Nakukuandikia kuuliza ushiriki wako katika utafiti huu ambao nitauliza maswali katika fomu ya aina tatu za dodoso: jamii-idadi ya watu, hesabu ya Becks Unyogovu (BDI) na Kiwango cha Dawa cha Morisky ambacho kitachukua dakika 30-45 kukamilisha.

Tafadhali kumbuka kuwa:

* Kushiriki katika utafiti huu ni hiari

* Kukubali kwako kushiriki katika utafiti huu hakukuzuii kujiondoa kwenye utafiti wakati wowote.

* Ukichagua kutoka kwenye utafiti huo au kukataa kushiriki hautapata adhabu yoyote au upotezaji wowote wa faida ambazo unastahiki kupokea.

* Maelezo yako ya kibinafsi yatahifadhiwa kwa siri

* Hautapokea ishara yoyote au faida ya kifedha kwa kushiriki katika utafiti.

* Katika tukio utapatikana kuwa na shida baada ya kuchambua habari uliyopewa, wewe

itasimamiwa na kuunganishwa na kliniki ya ufuatiliaji.

* Matokeo kutoka kwa utafiti huu yatasaidia kutambua mambo yanayohusiana na unyogovu kwa vijana

kuishi na HIV na matokeo yanaweza kusaidia katika kutunga sera ambazo zitasaidia katika kudhibiti

unyogovu kati ya vijana walio na HIV na hivyo kuboresha maisha na kufuata

tiba ya kurefusha maisha.

* Sehemu au nzima ya utafiti huu inaweza kupatikana kwako kwa ombi.

* Hakuna jibu la haki au hakuna

* Hakutakuwa na utaratibu vamizi wa mwili ingawaje maswali kadhaa yameulizwa labda

uvamizi wa kisaikolojia na uko huru kutojibu maswali kama haya na ikiwa

usumbufu wa kisaikolojia, utapewa msaada wa kisaikolojia na ikiwa utaathiriwa vibaya

utaunganishwa na kliniki ya msaada wa kisaikolojia.

Ikiwa una maswali juu ya utafiti ambao haujajibiwa katika habari ya idhini, wewe ni

huru kuwauliza. Kwa kuongezea, ikiwa una maswali katika siku zijazo unaweza kuwasiliana nami au yangu

wasimamizi kwenye anwani ifuatayo

1. Mchunguzi:

a. Dk. Faith Muhindi

Simu: 0728626430

Barua pepe: faithmuhindi@gmail.com

2. Wasimamizi:

a. Daktari Lincoln Khasakhala

Barua pepe: khaimbugwa@gmail.com

b. Dk Judy Kamau

Barua pepe: judykamau@uonbi.ac.ke

Appendix 8. Assent and Consent declaration form

Assent clause to be completed by the participant

Project Title: Prevalence of depression and adherence to treatment among youth living with HIV attending Kenyatta National Hospital Comprehensive Care Clinic (CCC)

Investigator: Dr.Faith Muhindi

We are doing a research study to find out how many young people infected with HIV suffer from depression and how it can affect the way they take the medication that helps them deal with HIV. Through this study we will find out what causes young people to be depressed and from that, come up with solutions that deal with those things that cause them to be depressed leading to a more joyful life.

Permission has been granted to undertake this study by the Kenyatta National Hospital-University of Nairobi Ethics Research Committee (KNH-UoN ERC Protocol No. KNH-ERC/RR/587)

This research study is a way to learn more about people. At least 186 children between the ages of 13-17 years and adults who are not older than 24 years will be participating in this research study with you.

If you decide that you want to be part of the study, you will be asked to fill three forms. The first form will have questions about your age, your sex, your education level for example. The second form will ask you questions about how you feel, how you are sleeping, eating and many more to help us to know if you have depression. The last form will ask you how you take the HIV medications and if there are times you miss taking them. Approximately 30-45 minutes will be needed to answer the questions.

There are some things about the study you should know. Some of the questions asked can make you feel uncomfortable and sad but we will be there to give you the necessary help and support you require. Being part of this study can result in good things happening to you. For example if we find out you are depressed we will start you off on medication and link you up with a follow-

up clinic. It will also make you feel good knowing that you played a role in coming up with ways to help other young people like you not get depressed.

When we are finished with this study we will write a report about what was learned. This report will not include your name or that you were in the study.

You do not have to be in this study if you do not want to be. If you decide to stop after we begin, that's okay too. Your parents know about the study too.

If you decide you want to be in this study, please sign your name.

I …..... want to be in this research study.

…… …….

(Signature/Thumb stamp) (Date)

Informed consent clause to be completed by participants' next-of-kin or guardian

I declare that the study has been explained to me in a manner obvious to me. I understand the nature, method, risks and benefits of the study.

My questions about the study have been answered satisfactorily.

I therefore give consent for my (state relationship) ---------- to participate in this study subject to their assent. I do this while reserving my right to revoke consent at any time should there be need to.

Date ----------

Signature of next-of-kin ----------

Relationship to patient ----------

To be completed by the researcher

I declare that I have given both a written and verbal explanation of the study. I have explained the purpose of the study, methods, risks and benefits of the study. I have answered and will continue

to answer any questions that may arise about the study. The participant will not suffer any adverse consequences in case of early termination of participation in this study.

Name of researcher ----------

Signature ----------Date ----------

Appendix 9. Swahili Translated consent declaration form

FOMU YA RIDHAA Kiambatisho 9. Fomu ya tamko la idhini na idhini

Kifungu cha idhini kitakamilishwa na mshiriki

Kichwa cha Mradi: Kuenea kwa unyogovu na kufuata matibabu kati ya vijana wanaoishi na HIV kuhudhuria Kliniki ya Kitaifa ya Huduma ya kina ya Kenyatta (CCC)

Mchunguzi: Dk Faith Muhindi

Tunafanya utafiti ili kujua ni vijana wangapi walioambukizwa HIV wanaugua unyogovu na jinsi inaweza kuathiri jinsi wanavyotumia dawa inayowasaidia kukabiliana na HIV.

Kupitia utafiti huu tutagundua ni nini kinachosababisha vijana kuwa na unyogovu na kutoka hapo,

kuja na suluhisho zinazoshughulika na vitu ambavyo husababisha kuwa na unyogovu na kusababisha a

maisha ya furaha zaidi.

Ruhusa imepewa kufanya utafiti huu na Hospitali ya Kitaifa ya Kenyatta-

Kamati ya Utafiti wa Maadili ya Chuo Kikuu cha Nairobi (KNH-UoN ERC Protocol No. KNH-ERC / RR / 587)

Utafiti huu ni njia ya kujifunza zaidi juu ya watu. Angalau watoto 186 kati ya umri ya 13-24 na watu wazima ambao hawajazidi miaka 24 watashiriki katika utafiti huu na wewe.

Ukiamua kuwa unataka kuwa sehemu ya utafiti, utaulizwa kujaza fomu tatu. Ya kwanza fomu itakuwa na maswali juu ya umri wako, jinsia yako, kiwango chako cha elimu kwa mfano. Ya pili fomu itakuuliza maswali juu ya unajisikiaje, unalala vipi, unakula na mengi zaidi tusaidie kujua ikiwa una unyogovu. Fomu ya mwisho itakuuliza jinsi ya kuchukua HIV dawa na ikiwa kuna nyakati unakosa kuzitumia. Takriban dakika 30-45 itakuwa inahitajika kujibu maswali.

Kuna mambo kadhaa juu ya utafiti unapaswa kujua. Maswali mengine yanayoulizwa yanaweza kufanya unahisi usumbufu na huzuni lakini tutakuwa hapo kukupa msaada na msaada unaohitajika unahitaji. Kuwa sehemu ya utafiti huu kunaweza kusababisha mambo mazuri kutokea kwako. Kwa mfano ikiwa tunaona una unyogovu tutaanza kutumia dawa na tutaunganisha na kufuata-kliniki. Pia itakufanya ujisikie vizuri ukijua kuwa umechukua jukumu katika kuja na njia kusaidia vijana wengine kama wewe wasiwe na unyogovu.

Tutakapomaliza na utafiti huu tutaandika ripoti juu ya kile kilichojifunza. Ripoti hii haitajumuisha jina lako au kwamba ulikuwa kwenye utafiti.

Sio lazima uwe katika somo hili ikiwa hautaki kuwa. Ukiamua kuacha baada ya kuanza,

hiyo ni sawa pia. Wazazi wako pia wanajua kuhusu utafiti huo.

Ikiwa unaamua unataka kuwa katika utafiti huu, tafadhali saini jina lako.

Na… .... unataka kuwa katika utafiti huu wa utafiti.

…….

(Saini / stempu ya kidole gumba) (Tarehe)

Tamko la Jamaa au mlezi

Natangaza kuwa utafiti umeelezewa kwangu kwa njia ya dhahiri. Ninaelewa asili, mbinu, hatari na faida ya utafiti huu.

Maswali yangu kuhusu utafiti huu yamejibiwa kwa kuridhisha.

Kwa hiyo mimi ninatoa idhini kwa (Taja uhusiano na Mshiriki) ---------- kushiriki katika utafiti huu wakati nikihifadhi haki yangu ya kusitisha ushiriki wake wakati wowote.

Tarehe ----------

Sahihi ya Jamaa au mlezi wa kisheria ----------

Uhusiano na mshiriki ----------

Tamko la Mtafiti

Ninatangaza kwamba nimetoa maelezo ya utafiti huu kwa maandishi na pia kwa maneno. Nimeelezea asili, mbinu, hatari na faida ya utafiti huu.

Nimejibu na nitaendelea kujibu maswali yoyote ambayo yanaweza kutokea kuhusu utafiti huu. Mshiriki hatapata athari yoyote iwapo atakomesha mapema kushiriki kwa utafiti huu.

Jina la Mtafiti ----------

Sahihi ---------- Tarehe ----------

Appendix 10: Dummy Tables

Dummy Table 1: Participants' characteristics per whether they have depressive symptoms

Variables		**Total**	**Depressive Symptoms**		**COR Curd odd ratio**	**p-value**
			Yes	**No**		
Gender	Female					
	Male					
	Transgender					
Age	13-16					
	17-20					
	21-24					
Educational Status	Lack of education					
	Primary					
	Secondary					
	Tertiary					
History of repeating a class	Yes					
	No					
Occupational Status	Working					
	School					
Living with	Both parents					
	Single parent					
	Other relative					
	Alone					
Parents well being	Both alive					
	Single alive					
	Both dead					

Monthly income	0-20.000					
	21,000-50000					
	>50,000					
Awareness of HIV Status	Yes					
	No					
Disclosure done by	Mother					
	Father					
	Guardian					
	Others					
Disclosure of HIV status to others	Yes					
	No					
Duration since knowing HIV Status	Less than a year					
	More than a year					
Route of infection of HIV	Perinatally					
	Behaviorally -sex with a man -sex with a woman -injection –drug use					
Clinical stages of HIV	Stage 1 and 2					
	Stage 3 and 4					
Awareness of HIV status of parents	Mother-Yes -No					
	Father-Yes -No					

Level of adherance	Highly adherent-8					
	Medium adherent-6<8					
	Low adherent<6					

Dummy Table 2: Effect of Predictor Variables on the severity of depressive symptoms

Variables	**No depression (BDI-1-10)**	**Mild mood disturbance(BDI-11-16)**	**Borderline clinical depression (BDI-17-20)**	**Moderate depression (BDI-21-30)**	**Severe Depression(BDI-31-40)**	**Extreme depression (>40)**
Low adherence <6						
Medium adherence 6<8						
High adherence 8						