MAGNITUDE AND DETERMINANTS OF SUICIDALITY AMONG HIV POSITIVE OUTPATIENTS IN MBEYA CITY

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MAGNITUDE AND DETERMINANTS OF SUICIDALITY AMONG HIV POSITIVE OUTPATIENTS IN MBEYA CITY

By

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A dissertation Submitted in (partial) fulfilment of the Requirements for the Degree of Master of Medicine (Psychiatry) of Muhimbili University of Health and Allied Sciences.

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CERTIFICATION

The undersigned certify that she has read and hereby recommend for acceptance by the Muhimbili University of Allied and Health Sciences a dissertation entitled **Magnitude and Determinants of suicidality among HIV positive outpatients in Mbeya City,** in (Partial) fulfillment of the requirement for the Master of Medicine (Psychiatry) of the Muhimbili University of Allied and Health Sciences.

……..

Dr Jessie Mbwambo

(Supervisor)

Date……..

DECLARATION AND COPY RIGHT

I, **Paul Sarea**, declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

Signature…….. Date……

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ABSTRACT

Background: Globally 33.3 million people were estimated to be living with HIV/AIDS at the end of the year 2009 compared to 33.4 million at the end of the year 2008**.** Sub Saharan Africa continues to bear the greatest share in global burden of HIV/AIDS, even though the rates of new HIV infections are declining, the total number of people living with HIV/AIDS keeps on rising. As a result of increasing awareness and utilization of HIV related care the prevalence of HIV has declined since the year 2000 but has stabilized in East African countries. The incidence slowed down in Tanzania to about 3.4 per 1000 person- years from 2004 to 2008. Studies have highlighted high rates of depression and suicidality among HIV patients. Depression and HIV+ status independently predict poor daily functioning. Studies have reported suicidal ideation rate of 34.7% among PLHA compared to 4% of the controls while 9.3% had suicide attempt compared to 2% of the controls.

Objectives: This study aimed at determining physical and mental health factors related to suicidality among HIV positive outpatients attending care and treatment clinic in Mbeya city.

Materials and methods: This was analytical cross sectional study in which 597 HIV patients were recruited from four different health facilities through systematic random sampling. Four health facilities located close to the town center were involved; one referral hospital, one regional hospital and two the health centers. Sociodemographic structured questionnaire was used to collect information. The sample included males and females aged 18 years and above. The consent was obtained before recruitment to participate in the study. Data was analyzed using SPSS version 17. Bivariate and binary logistic regressions were employed to draw inferences with regard to independent variables and suicidality.

Results: Among 597 participants, 219(37.7%) were males and 378(63.3%) were females. The mean age was 39.19 years (SD= 10.77). Rate of suicidality was found to be 8.9% suicidal thoughts, 3.2% suicide plan and 2.2% suicide attempts. Suicidality was independently associated with depression (OR=2.09, 95%CI=1.17-3.73, p=0.01 and stigma (OR=2.94, 95%CI=1.64-5.28, p<0.01).

Conclusion and recommendation: This research suggests suicidality was prevalent among HIV positive out patients in Mbeya city. This calls for the comprehensive assessment, treatment and referral for suicidality as a component of mental health programs among HIV outpatient's clinics.

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ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral therapy
ARVs	Ante retrovirus
CD4	Cluster of Differentiation 4
CI	Confidence interval
CIDI	Composite International Diagnostic Interview
CNS	Central Nervous System
CTC	Care and treatment clinic
DALYS	Disability Adjusted Life Years
HIV	Human Immunodeficiency Syndrome
ID	Identity
MINI	Mini International Neuropsychiatric Interview
MUHAS	Muhimbili University of Health and Allied Sciences
NACP	National AIDS Control Program
OR	Odds ratio
PHQ-9	Patients Health Questionnaire 9
PLHA	People Living with HIV and AIDS

SCID-P	Structured Clinical Interview for DSM-IV Axis I Disorders
TACAIDS	Tanzania Commission on AIDS
UNAIDS	United Nations AIDS
UNGASS	United Nations General Assembly Special Session
WHO	World Health Organization
YLDs	Years Lost Due to Disability

OPERATIONAL DEFINITIONS

Suicidality: in this study the term suicidality refers to suicidal thought, suicide plan and suicide attempt.

Suicidal thought is defined as engaging in thoughts intending to end one's life.

A suicidal plan means formulation of specific method through which one would intend to die.

Suicidal attempt refers to engagement in self injurious behavior in which there is at least intent to die.

Determinants: In this study the term determinants refers to socio demographic and HIV/AIDS related factors associated with suicidality.

Physical and mental health related conditions: refers to the following; depression, stigma, bereavement, physical comorbidities, living circumstances of the participant, WHO stage of HIV/AIDS, participants ARVs status.

Early stage of HIV/AIDS: refers to WHO stage I and II.

Late stage of HIV/AIDS: refers to WHO stage III and IV.

CHAPTER ONE

1.0 BACKGROUND AND LITERATURE REVIEW

1.1. HIV/AIDS, depression and suicidality

Globally 33.3 million people were reported living with HIV/AIDS at the end of the year 2009 compared to 33.4 million at the end of the year 2008 with an increase of 27% compared to the 26.2million figure in 1999 [1]. Asian epidemic is relatively stable with 4.9 million people living with HIV/AIDS at the end of the year 2009.

Sub Saharan Africa continues to bear the greatest share in global burden of HIV/AIDS, though the rates of new HIV infections are declining, the total number of people living with HIV/AIDS keeps on rising. In 2009 there were 22.5 million people living with HIV/AIDS which accounts for 68% global burden of HIV/AIDS.

East African HIV epidemics have declined since the year 2000 but are stabilizing in many countries. The incidence slowed down in Tanzania to about 3.4 per 1000 person-years between 2004 to 2008.The national HIV prevalence in Kenya fell from 14% in mid 1990s to 5% in 2006.In Uganda the HIV prevalence has stabilized between 6.5% and 7% since 2001.The HIV prevalence in Rwanda has been 3% since 2000 [1]. Tanzania Commission for AIDS in the year 2010 estimated the HIV epidemic in the mainland had stabilized around 6% since 2007.The current HIV prevalence of 5.7% shows a 1.3% decline from the 2003-2004 survey [2]

The World Health Organization (2004) reported depression to be one of the recognized causes of disability as measured by Years Lost due to Disability (YLDs).It contributed almost 12% of all disability. Depression ranked second in the global burden of disease list as measured by Disability Adjusted Life Years (DALYs) in the individuals aged 15-44 years in both sexes [3] Recent data has shown that up to 68% of HIV patients have

depression contributed by sociodemographic vulnerabilities. Studies have shown depression and suicidality among HIV patients were rarely diagnosed by providers [4].

1.2. Depression in PLHA

1.2.1. Magnitude of depression

A study conducted in Boston among general hospital emergency settings enrolling in HIV screening study reported 31% with clinically significant depressive symptoms (N= 3262), 10% screened positive for severe depressive symptoms. Among those with depressive symptoms 44% were less than 30 years, and 70% were female [5] . Another study done in California found 57% (N=247) of the PLHA were not depressed, 21% had a dysphoric range of depressive symptoms while 22% of the participants were labeled as depressed. The demographic factors associated with depression were of interest were age, lower level of education, level of CD4 [6]

The variation of depression symptoms across rural and urban people living with HIV/AIDS has been reported. Prevalence of depression among 646 people living with HIV/AIDS was found highest in rural areas of New England in USA compared to micropolitan and metropolitan areas, 59.5%, vs 51.7% vs. 41.2% respectively. In this study depression was found highest among rural patients on antiretroviral medication [7]

Similar high rate of depression amongst PLHA have been reported by studies in low and high income countries. The prevalence of current and past major depressive disorder among 429 HIV- infected individuals attending South African public sector clinics was 53% and 28% respectively [8].The burden of depression associated with HIV/AIDS has been noted. Recent data has shown that up to 68% of HIV patients have depression according to the study done in Peru. Literature indicates that sociodemographic vulnerabilities contribute to occurrence of depression and suicidality in this group and that these conditions are rarely recognized by providers [4]

Recent literature in high income countries has shown that as much as 50% of people living with HIV/AIDS reported cognitive difficulties associated with neurophysiological impairments and depression. This suggests the severity of depression in HIV/AIDS is associated with higher levels of cognitive dysfunction. It has been shown that higher social support are associated with lower rates of depression [9] . A study conducted in Jamaica reported a 43% prevalence of depression among PLHA attending outpatient clinics. Among those meeting criteria for depression 33% reported HIV as the most stressful factor in their lives, followed by finance and employment [10]

Some studies have suggested causal link between depression and HIV/AIDS. South African study reported 9% (N=4351) of major depressive disorder may be attributable to death caused by HIV/AIDS. This suggests that AIDS related mortality may contribute the burden of mental illness in areas of high HIV prevalence [11]. In a study examining the persistence of psychiatric disorder in cohort of PLHA, major depression and post traumatic stress disorder were reported to be the most common disorders at baseline and follow up. Major depression constituted 35% (N=149) at baseline and 26% at six months follow up [12] .Other comparative study done in Uganda among PLHA (N=102) and non PLHA with depression reported depression symptoms in the two groups to be 53.9% vs. 28% respectively [13]

1.2. Depression in PLHA

1.2.2. Depression severity and importance to establish in PLHA

Severity of depression in PLHA ranges from mild to severe. A large proportion present with mild to moderate depression .Depression in PLHA is often reported comorbid with other psychosocial problems or difficulties, one study conducted in South Africa showed more than 30% of the participants (N=1063) had symptoms of depression. Depression was associated with internalized stigma and history of substance use in the past three months prior to the survey [14]. Depression and anxiety disorders among South African

sample of PLHA reported 25% (N=89) mild to moderate depression, 20% moderate to severe depression and 18% severe depression. Patients receiving ARVs had low mean score for depression symptoms compared to those not on ARVs [15]

A study conducted in Uganda reported 21% (N=587) of the participants had depression with function impairment compared to 24% using symptom criteria alone [16]. A study done in Botswana among HIV positive individuals found 38% (N=120) of patients had depression; over 24% had criteria for major depression. Depressive symptoms severity ranged as follows; 59% had mild depression, 27% moderate depression and 14% severe depression [17]

Magnitude of depression among 220 HIV/AIDS outpatients in Tanzania was 15.5% of the study subjects; moderate to severe depression occurred in 2.7% of the subjects [18] .The variation in severity of depression in PLHA is important as simple and brief interventions are feasible and can be implemented in low and middle income countries by non professional trained health care workers [19 20]

1.3. Suicidality definition

Suicide is defined as a death that results from an intentional, deliberate self-inflicted act. A suicidal behavior comprises of suicide together with other series of behavior leading to complete suicide. This includes suicidal thoughts, suicidal plans, deliberate self harm and suicide attempts. The term suicidal behavior is mainly used to refer to suicide attempts and deliberate self harm, including attempted suicide and deliberate self harm. Suicidal thoughts are persistent patterns of thinking about being better dead or of ending one's life.

A suicide plan means formulation of specific methods through which one would intend to implement in order to die and suicidal attempts refer to engagement in a self injurious behavior in which there is at least intent to die. Deliberate self harm is self injurious

behavior in individual with no intent to die and usually through the use of non lethal means without fatal outcome [21]

1.4. Suicidality in general population

WHO estimates rate of suicide at 16.7 per 100,000 person years; ranking suicide as the 14th leading cause of death worldwide and accounting for 1.5% of all deaths [22] . Estimates in low income countries were similar to those of high income countries for suicidal ideation (3.1–12.4% *v.* 3.0–15.9% respectively), suicide plan (0.9–4.1% *v.* 0.7–5.6% respectively) suicide attempt (0.7–4.7% *v.*0.5–5.0% respectively).The study showed cross national consistency of key risk factors for suicidality including female gender, younger age and low education attainment [22].

Other studies on rates of a non fatal suicidal behavior in low and high income countries have been reported. A rate of suicidal ideation, plans, and suicidal attempts in South Africa was 9.1%, 3.8%, 2.9% (N=4351) respectively. Women reported higher rates of attempted suicide compared to men, 3.8 % vs. 1.8 % respectively. Ethnicity, presence of psychiatric morbidity and substance use were associated with suicidality. Participants with at least one DSM-1V disorder were four times more likely to attempt suicide than those without any disorder, while those with three or more disorders were eight times more likely to attempt suicide [23]

The study done in Nairobi reported 10.5% of all BDI-II suicidal symptoms combined. Suicide thoughts without plans accounted for 9% of all suicidal symptoms. The highest frequency of 14.5% suicidal symptoms was found among the younger age (18-20) than the older age (over 75). Female gender and being divorced was associated with highest prevalence of suicidal symptoms combined; at the rate of 20.7% compared to 7.9% of married group. Low education level had the least prevalence at 3.7% compared to the persons with higher levels of education [24]

A study on the suicide profile in Dar- es- salaam among postmortem established social conflicts as main reason for suicide in 57.3% of successful suicides (N= 100). Marital conflicts, disappointment in love affairs and unwanted pregnancies, chronic mental illnesses and alcohol dependence were associated with suicide. HIV infection and AIDS estimated at 8% in this sample [25]

1.5. Suicidality among PLHA

Suicidality in PLHA is often associated with variety of sociodemographic and other factors. A study conducted among outpatients PLHA in India reported suicidal wish in 14% of the fifty one HIV infected heterosexuals. Suicide, depression and anxiety disorders ware reported in this study associated with substance use, psychiatric morbidity. Suicidality was associated with presence of physical illness, family support and presence of AIDS in the spouse [26].

A study in New York to determine the effect of HIV testing on suicidal ideation explored suicidality at one ,two and eight weeks after notification (N=301). While at entry point the rate of suicidal ideation were nearly identical between the two serological groups of HIV positive and negative persons the rate of suicidal ideation in the HIV positive persons increased to 25 % in HIV positive compared to 15.5% in HIV negative persons at one week and eight weeks and the respective rates of suicidal intent were 2.5% and 1.6% respectively [27]

Studies on proportion of suicide victims who are HIV positive in high income countries have been done. A study done in New York City among 1875 suicide victims showed crude proportion of 8.8% seropositive subjects. HIV suicide victims were more likely to be men in 87.2% of the cases as compared with HIV seronegative subject [28]. Suicidality among seropositive male and females in Australia indicated 6.7% female with suicide plans without plans and attempts compared to 21% the male participants who experienced suicidal thoughts, plans or attempts since they became seropositive [29] .

Other studies conducted in a similar settings of high income countries (N=113) reported suicide thoughts associated with sexual orientation. Individuals symptomatic for HIV were more likely to commit suicide at the rate of 36% compared to asymptomatic individuals at the rate of (7%) [30]

Different studies in high and low income countries indicated suicidality in PLHA associated with various factors. One comparative study in USA reported suicidal ideation significantly higher in HIV positive than in HIV negative group, current major depression `compared to those with lifetime history of major depression. Rates of past life time history of suicide attempt was 29% among HIV positive men and 21% among HIV negative men [31]

Another study conducted in United States of America among HIV-positive persons (N=2909) reported 19% of the participants had suicidal thoughts, while 7% of them had suicide plan. Individuals in primary relationship were 23% less likely to report suicidal ideation. Participants who reported marijuana use were 34% more likely to report suicidal ideation while those who reported affective symptoms were 1.5 times more likely to report suicidal ideation [32]

A longitudinal study conducted over 20 years in Swiss reported suicide rate of 158.4 per 100,000 person's years. The study showed decline in mortality ratio in men from 13.7 in pre ART era to 3.5 in the ART era and from 11.6 to 5.7 in women. Higher suicide rates were associated with older patients, men, injection drug users and patients with advanced clinical HIV disease. An increase in the CD4 count was associated with reduced risk of suicide [33]

A study conducted in South Africa indicated concomitant increase in prevalence of suicide and HIV/AIDS along with regional deaths from natural causes between 1996 and 2000.The prevalence of HIV/AIDS had increased from 14% in 1996 to 25% in 2000. [34]

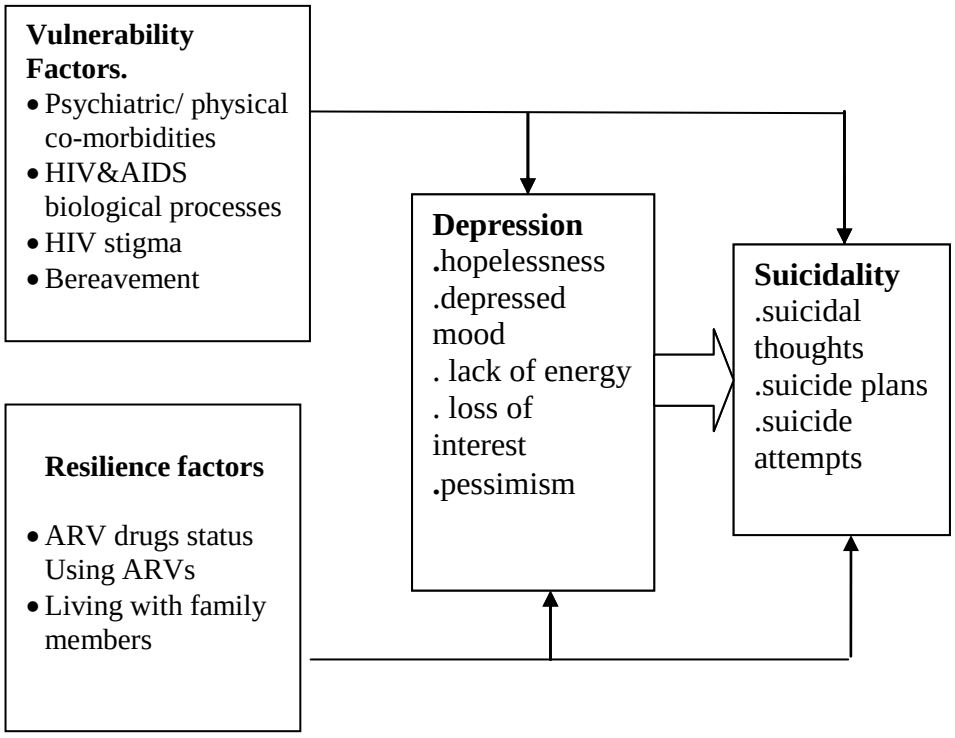
1.6. STATEMENT OF THE PROBLEM

Suicidal behaviors are known to be associated with stressful situations in life. A person is believed to be in stress when coping mechanisms are inadequate to deal with traumatic moments in life. One traumatic moment is when someone is informed of his/her HIV status and as the infection progresses to AIDS additional difficult moments are encountered. Suicide among person accessing HIV care and treatment has not been a focus of many studies globally. This is probably because it is assumed that if people are actively accessing treatment they are less likely to consider suicide. No study has been conducted in Tanzania on suicidality amongst people living with HIV accessing comprehensive health care including pre and post test counseling, enrollment to antiretroviral medication services, diagnosis treatment of opportunistic infections, patient education and community based support services. Globally every year, almost one million people die from suicide; this is about 1.5% of all deaths, making suicide the 10th leading cause of death globally [3] .Suicide is among the three leading causes of death among those aged 15-44 years in some countries, as is the second leading cause of death in the 10-24 years age group [3] . These age groups are also vulnerable to HIV transmission risk and the burden of depression associated with HIV is high. Suicide is the most common cause of mortality in persons with depression, hence making suicidality in persons living with HIV an important topic for research focus. Studies have shown depression and suicidality among HIV patients are rarely recognized by providers [4] .The burden of suicidality among HIV patients has been highlighted in predominantly high income settings. Some studies in low income countries reported suicidal ideation among PLHA rate of 34 % compared to 4% of the non HIV infected controls and 9.3% of suicide attempts compared to 2% of the controls [35]

1.7. RATIONALE AND JUSTIFICATION

People living with HIV/AIDS accessing HIV related care would appear to be coping; however, we know that there are many difficult moments as HIV disease progresses even for those receiving care and treatment. There is limited data from Tanzania on how PLHA deal with these very difficult moments. Do some feel they would rather give on life to the point of suicide? This study aims to determine how common suicidality is among PLHA accessing HIV care and treatment in Mbeya city and associated factors so as to inform preventive interventions. This study on suicidality among HIV positive patients is the first to be conducted in Tanzania. The results of this study will be important in developing and implementing mental health services related interventions to prevent suicidality in HIV population accessing care and treatment clinics.

1.8. CONCEPTUAL FRAMEWORK



This conceptual framework is based on a Stress and coping model of Suicide risk [36]. The vulnerability and resilience factors interact with psychological responses to precipitating events that increase tendency to suicidality and suicide risk. In the presence of vulnerability and resilience factors and depending on the way individuals evaluate the nature of stressful events they experience, can or not lead to cognitive behavioral disengagement characterized by high reliance on cognitive and experiential avoidance as a means of coping. These cognitive changes promote behavioral disinhibition leading to elevated risk for suicide. This study conceptualizes vulnerability factors are physical or psychiatric comorbidities; HIV/AIDS biological processes, including drops in levels of immunity, advancing stage of HIV disease as well as HIV related stigma and bereavement. Resilience or protective factors include social support, using ARVs, married status, education level and being in gainful employment.

1.9. REREARCH QUESTIONS

This study aimed at answering the following research questions:

1) How common is suicidality among PLHA attending selected HIV care and treatment clinics in Mbeya city?

2) What sociodemographic characteristics of the participants are associated with suicidality?

3) Are there any specific factors determining suicidality among PLHA accessing care and treatment clinics in Mbeya city?

1.10. OBJECTIVES:

1.11. Broad Objective

To determine magnitude and determinants of suicidality among HIV positive outpatients in Mbeya City.

1.12. Specific objectives:

(1) To describe sociodemographic characteristics of PLHA accessing HIV CTCs in relation to suicidality.

(2) To determine the magnitude of suicidality (thoughts plans and attempts) among PLHA attending care and treatment clinic by sex.

(3) To determine associations between physical and mental health related conditions and suicidality.

CHAPTER TWO

2.0. METHODOLOGY

This section describes the methods used in this study. Describing the study area, research design, study population, data collection process, variables measured and data analysis elaborated.

2.1. Description of the study area

The study was conducted at the HIV and AIDS Care and treatment clinic in Mbeya City, including four different Cares and Treatment Centers located close to the city centre. The centers are Mbeya referral Hospital, Kiwanjampaka Health centre, Ruanda health centre and Mbeya Regional Hospital. All centers are located close to the city center with the longest distance between the centers of approximately 2.5 kilometers.

Mbeya Region has a total of eight districts, namely Mbeya Urban, Mbeya Rural, Mbozi, Ileje, Rungwe, Chunya, Mbarali and Kyela. The whole region has a population of 2 million (2005 census and the population of Mbeya City was approximated to be 300,000 people (2005 census) and here is where the current study centers are located. Before spreading the services to the periphery, patients from all other districts attended the Care and treatment services at Mbeya Referral Hospital which is located in Mbeya city. Currently all district hospitals have their own Care and treatment services though some patients still attend services at Mbeya Referral hospital and facilities located in the city. All care and treatment services are located within the government based facilities.

2.2. Research design

This was descriptive cross sectional study which was conducted among HIV/AIDS outpatients attending care and treatment clinic in Mbeya City .The study was conducted between September and October 2011. A structured questionnaire was used to obtain information from the respondents.

2.3. Study population and sampling procedures.

The participants were the people living with HIV/AIDS who were attending the four conveniently selected care and treatment Clinics in Mbeya City. Selection of centers was based on close proximity to the town center to ease access, reduce travelling costs and ease supervision work during the data collection process.

Sampling frame was the files of patients expected to visit Care and Treatment clinic in a particular day who fulfilled the inclusion criteria. Included were PLHA on ART and PLHA pre ART initiation who were attending the clinic for the first time as well as those who were already enrolled fore care prior to the beginning of this study. To recruit a sufficient sample size of six hundred participants, one hundred and fifty five participants were systematically and randomly selected from each facility. Participant's selection was based on the average number of patients attended in each facility. The four health facilities included two health centres, one referral hospital and a regional hospital each with an average number of 100 patients attended per day in clinics per held daily on Monday to Friday. This approximated to two thousand patients in four weeks. This number was divided by the required sample size and approximately four participants were planned to be randomly selected per day per clinic. The integer two was chosen as a starting point. Then every 6^{th}, 10th, and 14th patient was invited to participate and so on until the expected number of participants per day was reached. They were approached at the exit point after they had received all other services. Those who agreed to participate were listed in a recruitment register.

To ensure anonymity only patient ID was documented into the study recruitment register. A detailed consent process for participation in the research was followed. Each patient expressing interest to participate was provided a leaflet with information about this study including aims of the study, risks and benefits of participation, who to consult in case of any problems posed to participants by the research process. Finally signed

consent was obtained for those that consented, followed by administering the questionnaire.

2.4. Inclusion criteria

1) HIV positive outpatients attending Care and Treatment clinic aged 18 years and above.

2) Outpatients attending CTC both on ART and not on ART.

3) Voluntary participation indicated by signing the written informed consent.

2.5 Exclusion criteria

1) Patients who are seriously ill and unwilling to participate

2.6. Sample size calculation

The estimated sample size N was computed using the formula below,

$$N = \frac{z^2 pq}{d^2}$$

Where;

N = Estimated Sample Size

Z = is the standard deviation in normal population, which turns out to be 1.96, using the 95% confidence interval.

P= estimated prevalence of suicidality in HIV/ AIDS =25% [34]

q = (1-P) = proportion

d= margin of error= 0.04

$N=1.96^{2*}\ 0.25*0.75/\ 0.04^2$

N= 450+20% (the non response rate).

N=600.

2.7 Data collection instruments

A structured interview schedule was used that consisted of subsection as outlined below. The entire interview schedule and its translation to Swahili can be found in the appendix. The interview collected information for predictor variables in the following areas:

Socio demographic characteristics:

These included, sex, age, residence, level of education, religion, marital status and socioeconomic measures such as employment, housing, water supply, food security etc (questions 1 to 9)

Information related to respondents HIV status:

Date of testing for HIV status, partners HIV status, whether initiated on ARVs or not, experiences of HIV related stigma and history of mental and physical illness (question 10 to 20)

Depression:

The Patient health questionnaire (PHQ-9), a structured tool developed for screening of depression in primary care settings was used to measure depression. It comprises of 10 items and was developed for use in busy outpatient clinics. The first 9 items assess the presence and severity of depression as per Diagnostic and Statistical Manual version

four (DSM IV) criteria .The last one item assesses functional impairments resulting from depressive symptoms. The presence of depression is assessed by each item in the two weeks period prior to the interview and is scored on a four points Likert scale from 0 meaning no symptoms at all to 3 meaning experienced symptoms nearly every day. A Swahili version of PHQ-9 and shorter PHQ-2 have been validated in Kenya amongst PLHA and showed good internal consistency with Cronbachs alpha of 0.8 [37] and 0.78 [38] respectively

Suicidality:

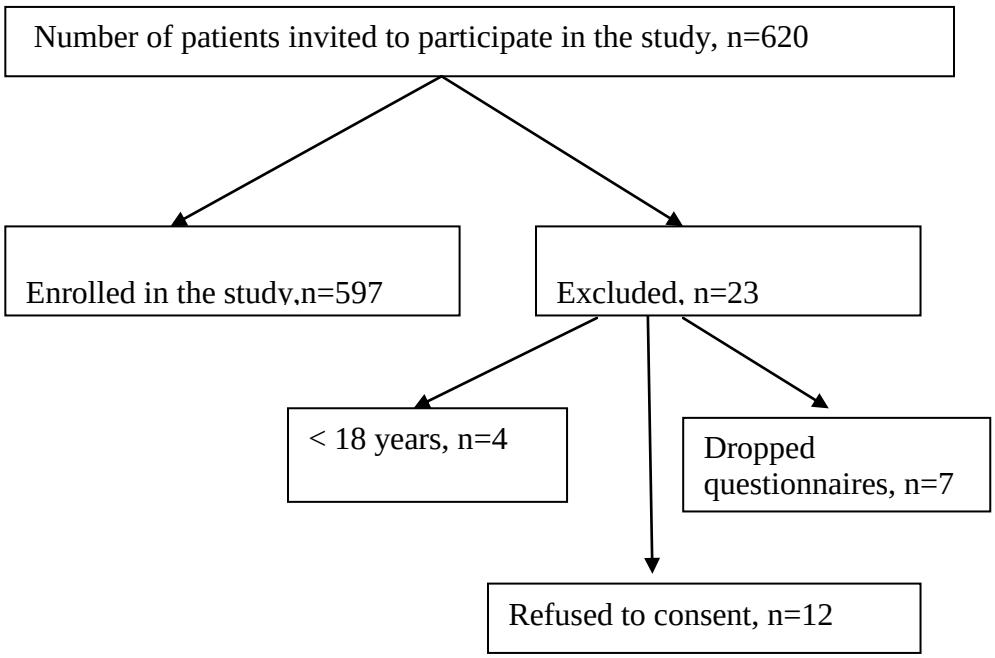
Was the major outcome in this study and measures were included in the last part of the questionnaire. Six items of the Mini International Neuropsychiatric Interview (MINI), relating to suicidality were utilized. The MINI is a structured interview for the major axis I psychiatric disorders based on DSM IV and ICD 10. Validation and reliability studies indicate MINI has acceptable validation and reliability scores. It has been used cross-culturally including in Uganda [39].

2.8. Data collection procedures

Data collection was done using a face to face interview with a structured questionnaire. The questionnaire was administered in the outpatient clinic rooms where confidentiality and anonymity was highly observed. Voluntary participation was practiced by giving respondents the chance to read thorough the consent form which was translated in Kiswahili language. Those who did not consent were assured of no negative consequences on their future rights to receive HIV CTC services and were allowed to leave to proceed with other activities. The training of four research assistants, one in each of the four health facilities occurred before actual data collection was initiated. The principal investigator visited the facilities at least once after two days or whenever necessary to review data quality and address challenges that had arisen during the data

collection process. A total of 620 participants were invited to participate and results of recruitment process are as outlined in Figure 1

Fig 1: Study population recruitment process



2.9 Variable summarization tools used and analysis plan

The outcome variable in these analyses was suicidality. Suicidality was categorised as suicidal thoughts, plans and attempts at the level of univariate analysis. Suicidality was categorised as one variable into presence and absence of suicidality at the level of bivariate and multivariate analysis. The presence of suicidality was defined as an affirmative response to at least one of the questions asked on suicidal thoughts, plans and attempts. The absence of suicidality was defined by taking at least one of the no responses as regards to suicidal thoughts, plans and attempts. The independent variables

were grouped into social-demographic factors, and selected physical, mental health related factors. The first group include age, sex, marital status, religion, residence, level of education, occupation, living circumstances (i.e. whether respondent lived alone, with a spouse or with other family members), and source of income . Selected physical and mental health related factors measured included depression, stigma, living circumstances of the participant, physical comorbidities, patient ARV use status and stage of HIV/AIDS. Selected physical and mental health variables were dichotomised for bivariate and multivariate analysis.

Chi square test/Fishers test: Before conducting logistic regression chi square test was performed to check out how independent variables relates to other variables. The exact Fishers test was performed to assess the relationship of variables where the cell had counts less than five in tables that are not two by two.

Regression analysis: Logistic regression was chosen because the variables were dichotomised and therefore categorical to suit the binary logistic regression analysis model. Backward method of logistic regression was applied to determine which independent variables were the good predictors of suicidality and depression. The backward method has an advantage of removing potential confounders on examining effect of one independent variable while controlling for the effects of other independent variables.

2.10. Possible sources of errors

Non response bias on questions related to suicidality. In some individuals it may have been difficult to honestly give details of their previous and current feelings on thinking, planning and attempting suicide. This tendency for people to present the favourable image for them on questionnaires and health related information may influence the results by creating false relationship between variables [40]. A non response bias may have

occurred because of scepticism on nature of the questions and handling of data despite assurance of the privacy and confidentiality.

2.11. Ethical consideration

The ethical clearance was obtained from the Senate Research and Publishing committee of Muhimbili University of Health and Allied Sciences. Permission to conduct the study was also obtained from the Director of Mbeya City and Referral Hospital. The ethical clearance was obtained through the City Medical officer of Health through collaboration with Mbeya City Director. Confidentiality was observed by only documenting patient ID number with no names appeared on the questionnaire. Benefits and risks of participating were clearly stated, participants were clearly informed that no financial gain expected. The research assistants were given introductory protocol training on the purpose of the research. All these information was made clear in the consenting form. Participants who needed further assessment and treatment for suicidality were referred to Mbeya referral Hospital department of psychiatry and mental Health for further management.

CHAPTER THREE

3.0. RESULTS

Background Descriptives

Table 1 below shows, total of 597 respondents, aged between 18 and 77 years participated in the study of whom 219 (36.7 %) were males and 378 (63.3 %) were females. The mean age was 39.2 years (SD= 10.8) and the median age was 39 years. Comparing the mean age of male and female participants, men had higher mean age (41.9), SD= 11.5 than females (37.6), SD= 9.7.

The majority, 522 (87.4%) of the participants were Christians while only 56(9.4%) were Muslim. The remaining minority were neither Muslims nor Christians. Most of the participants reported exposure to primary education levels; this group comprised more than seventy percent. A small proportion had revealed either no formal education or secondary education and above. About three quarters of the participants resided in Mbeya Urban district, remaining quarter resided in Mbeya rural and outside Mbeya region.

In total more than eighty percent reported receiving social support from a spouse (44.4%) or relatives (41.4%) while 84 (14.1%) lived alone. Two hundred and twenty five (37.7%) of all respondents had experienced various forms of stigma since they became HIV positive.

Table 1: Socio demographic characteristics of the study participants (N=597)

Sociodemographic variables	N (%) or Mean (±2SD)
Mean age (years) (range 18-77)	39.19 (± 10.77)
Age groups (years)	
≤31	158(26.5)
32-39	161(27.0)
40-46	140(23.5)
47+	138(23.0)
Sex	
Male	219(36.7)
Female	378(63.3)
Marital status	
Married	277(46.4)
Unmarried	70(11.7)
Widow	160(26.8)
Others	90(15.1)
Level of education	
No formal education	85(14.2)
Primary education	420(70.4)
Secondary education and above	92(14.4)
Religion	
Christian	522(87.4)
Moslem	56(9.4)
Others	19(3.2)
Residence	
Mbeya urban	455(76.2)
Mbeya rural	76(12.7)
Other region	66(11.1)
Source of income	
Formal employment	38(6.37)
Informal employment	559(93.63)
Who participant lives with	
None	84(14.1)
Spouse	265(44.4)
Relatives	248(41.5)

Key: SD – standard deviation

Table two shows that a high proportion of females compared to males reported suicidality. Thirty nine (10.3%) females reported suicidality compared to seventeen (7.8%) males. Females more often attempt, males more often complete, but the difference is not statistically significant. Regarding the age, the age group forty to forty six reported suicidality compared to other age groups, however no statistical significance of the differences are noted.

Participants who were living alone seems to be more likely to become suicidal compared to those who were living with spouse or relatives, meaning that living with spouse or other family members may have some protection against suicidality. Regarding marital status widowed and the single marital status reported suicidality compared to other groups, twenty two (13.8%) and seven (10.0%) respectively. Generally, of the sociodemographic characteristics shown in this table there was no statistical difference within the groups as far as prediction of suicidality is concerned.

Table 2: Socio-demographic characteristics of the participants in relation to suicidality N=597

Variable	Suicidality		p value*
	Yes (%) N=56	No (%) N=597	
Sex			
Male	17(7.8)	202(92.2)	0.382
Female	39(10.3)	339(89.7)	
Age			
<31	13(8.2)	145(91.8)	0.481
32-39	14(8.7)	147(91.3)	
40-46	18(12.9)	122(87.1)	
47+	11(8.0)	127(92.0)	
Marital status			
Married	20(7.2)	257(92.8)	0.151
Single	7(10.0)	63(90.0)	
Widow	22(13.8)	138(86.3)	
Separated/cohabiting	7(7.8)	83(92.2)	
Level of education			
No formal education	9(10.6)	76(89.4)	0.313
Primary education	35(8.3)	385(91.7)	
Secondary education and above	12(13.0)	80(87.0)	
Religion			
Christian/Moslem	56(9.7))	522(90.3)	0.242
Others	0(12.5)	19(100.0)	
Residence			
Mbeya city	43(9.5)	412(90.5)	0.810
Outside Mbeya City	13(9.2)	129(90.8)	
Employment			
Formal employment	42(9.0)	427(91.0)	0.496
Informal employment	14(2.3)	114(89.1)	
Who participant lives with			
Alone	11(13.1)	73(86.9)	0.267
Spouse	20(7.5)	245(92.5)	
Relatives	25(10.1)	223(89.9)	

*Fishers exact test used

Table 3: Distribution of suicidal thoughts, plans and attempts among 597 HIV positive outpatients attending care and treatment clinic in Mbeya city by sex.

Suicidality	**Sex**		**Total N=597**
	Male N=219	**Female N=378**	
Suicidal thoughts			
Yes	17(7.76)	36 (9.5)	53 (8.9)
No	202(92.4)	342 (90.5)	544(91.1)
Suicide plans			
Yes	5(2.3)	14(3.7)	19(3.2)
No	214(97.7)	364(96.3)	578(96.8)
Suicide attempts			
Yes	5(2.3))	8(2.1)	13(2.2)
No	14(97.7)	370(97.9)	584(97.8)

Among 597 respondents, fifty three (8.9%) reported suicidal thoughts. Suicide plans were reported by nineteen participants (3.2%)

Suicide attempt was measured by taking only those who attempted suicide within the past one month at the time of interview. Lifetime events of suicide attempts were not considered because the association between suicide and HIV disease would have been difficult to ascertain. Among the participants thirteen (2.2 %) reported to have attempted suicide in the past month prior to the interview. Suicidal thoughts and plans were reported by a larger population of females than males while suicidal attempts were almost equally reported by both sexes.

Bivariate analysis of physical and mental health related variables associated with suicidality

Table four shows participants who had depression compared to not had a 2 and half times likelihood of reporting suicidality (15.6%) compared with those who had no depression (6.7%) ,(p value < 0.01) ,OR= 2.58, 95% confidence interval(1.48-4.51) the difference being statistically significant. Participants who had experienced stigma showed more than 3 times greater likelihood to report suicidality (16.0%) compared to those without experiences of stigma (5.4%), (p value < 0.01). The variation was also statistically significant. Regarding whom participant lives with, those who lived alone were more likely to present with suicidality (13.1%) compared to the participants who lived with other family members (8.8%), (p value=0.22). The difference has no statistical significance.

Patients who had physical comorbidities, meaning those who had been admitted for any physical illnesses in the past one month had 12 % higher likelihood of reporting suicidality (12.7%) compared to those who had no physical comorbidities in the month prior to interview. The association is not statistically significant.

The stage of HIV/AIDS was not significantly associated with suicidality. This was also the case for ARVs status, participants who are not taking ARVs compared to those who were taking did not vary significantly with regards to reported suicidality.

Table 4: Association between physical and mental health variables associated with suicidality among 597 HIV positive outpatients attending CTC in Mbeya city.

Variable	**Suicidality**		**Total**	**OR(95%CI)**	**p value**
	Present (%)	Absent (%)			
	N=56	N=541			
Depression					
None	28(6.7)	390(93.3)	418	1.00	
Mild/Moderate to severe	28(15.6)	151(84.4)	179	2.58(1.48-4.51)	< 0.01
Stigma					
Reported	36(16.0)	189(84.0)	225	3.35(1.89-5.59)	< 0.01
Not Reported	20(5.4)	352(94.6)	372	1.00	
Who participant lives with					
Alone	11(13.1)	73(86.9)	84	1.00	
With others	45(8.8)	468(91.2%)	513	0.64(0.32-1.29)	0.23
Bereavement					
Bereaved	17(11.7)	128(88.3)	145	0.71(0.389-1.30)	0.26
Not bereaved	39(8.6)	413(91.4)	452	1.00	
Physical comorbidities					

Variable	Suicidality		Total	OR(95%CI)	p value
	Present (%)	Absent (%)			
Absent	30(7.7)	362(92.3)	392	1.75(1.01-3.05)	0.05
Present	26(12.7)	179(87.3)	205	1.00	
WHO HIV stage					
Late	35(10.2)	309(89.8)	344	1.25(0.71-2.21)	0.48
Early	21(8.3)	232(91.7)	253	1.00	
Patients ARV status					
Not using ARVs	11(10.9)	90(89.1)	101	1.23(0.61-2.46)	0.58
Using ARVs	45(9.1)	451(90.9)	496	1.00	

Key: OR= Odds ratio

CI= Confidence interval

Multivariate analysis of physical and mental health related variables associated with suicidality.

Using forward method of binary logistic regression, factors entered into the analysis model include depression, stigma, and physical comorbidities. Criteria for selection being the p value equal to or less than 0.2 from the bivariate analysis which included other factors namely bereavement, who participant lives with (a proxy measure for social support), WHO HIV status, participants ARV status.

Depression and stigma were independently associated with suicidality. Participants who had depression were 2 times more likely to present with suicidality compared to those with no depression, (OR=2.096, 95% CI=1.176-3.734, p value 0.012). Participants who

experienced stigma were almost 3 times more likely to present with suicidality compared with those who had such experience ,(OR=2.9. 95%CI=1.638-5.277, p value <0.01). The association is highly statistically significant

Table 5: Logistic regression analysis of physical and mental health variables related to suicidality among 597 HIV positive outpatients attending CTC in Mbeya city.

Variable	**Suicidality**		**COR (95%CI)**	**AOR (95%CI)**	**pvalue**
	Yes (%)	**Total**			
Depression					
Mild/moderate to severe	28 (15.6)	179	2.58(1.48-4.51)	2.09(1.17-3.73)	0.01
None	28(6.7)	418	1.00	1.00	
Stigma					
Reported	36(16.0)	225	3.35(1.89-5.59)	2.94(1.64-5.28)	< 0.01
Not Reported	20(5.4)	372	1.00	1.00	
Physical Comorbidities					
Absent	30(7.7)	392	0.57(0.33-0.99)	1.42(0.79-2.53)	0.23
Present	26(12.7)	205	1.00	1.00	

Key; COR= crude odds ratio

AOR= Adjusted odds ratio

CI= Confidence interval

CHAPTER FOUR

4.0. DISCUSSION

The main objective of this study was to determine magnitude and factors associated with suicidality among HIV positive outpatients attending care and treatment clinic in Mbeya city.

This study found the suicide thoughts rate of 8.9%. This rate seems lower than international findings of 14% suicidal thought rate among HIV positive individuals [26]. Other studies reported suicidal thought rate of 13.9% according to the study done in New York [27]. The study done in USA reported relatively higher (19%) prevalence of suicidal thought among HIV individuals in the sample studied [32]. The study done in Australia found 6.7% rate of suicidal thought among HIV seropositive females, relatively similar to the current study [29] . However some studies among HIV population reported the suicidal thought of 27% and 20% respectively, the rate which was almost two times compared to the current study [30].The difference could be attributed to the variation in cultural perspectives related to the way participants reported their suicidality experience. The difference could also be attributed to tools used to collect the information from the participants. Other differences could be attributed to study design, cross sectional versus longitudinal studies which gives more chances to collect information from participants compared to cross sectional studies. Some of these findings were reported from small samples.

Exceptionally high rates of suicide thought among HIV patients had been reported with small samples. The rate of suicide thought was reported to be 59% among fifty four men who HIV positive. However, since the study also aimed at ascertaining risk behaviors and social service need for the HIV positive group of men, there was a possibility that the participants over reported their suicidal behaviors for social gain [41]. Another

comparative study done in Nigeria found 34.7% of HIV patients had suicidal ideation compared to 4% of the controls [35]

In this study the extent of suicide plan was 3.2%. The New York based study reported 2.5% of the HIV seropositive individuals having suicidal plans compared to 1.6% of the HIV seronegative counterpart [27]. This reflects rate relatively higher in HIV infected group than in the HIV negative group. Some studies reported the rate of suicide plan among those who reported suicide thoughts. Among 19% of the participants who reported suicidal thoughts, 7% of them had suicide plan [32]. The current study did not look at the rate of suicide plan among those who reported suicide thoughts. In South American study the rate of suicide plan was 3.1% which is close to the current study finding [21]. The relatively higher rate of 3.8% suicide plan was found in South African study [23].

Suicide attempts rate in the current study is 2.2%. This finding comprises only the current suicide attempt (within one month) at the time of interview. The past (lifetime events) of suicide attempts were excluded because it could not have been easy to differentiate or to link them to HIV infection. Other studies that included lifetime history of suicide attempt reported rates of 29% among HIV positive men and 21% among women [31]. The difference could be explained based on various issues including not reporting the experience of suicidal attempts. A longitudinal study done among Puerto Rican men and women with HIV/AIDS revealed the increase of suicide attempt from 9%(in the beginning of the study) to 22% during the five years duration of the study [42] . The difference could be due to type of study design, the cross sectional design against the longitudinal retrospective study which can capture more information in the course of follow up. Contrary also to this study men were more likely to attempt suicide than women.

This study found depression and stigma as the factors determining suicidality; participants with depression were at high risk of suicidality compared with those with none ($p < 0.01$). Participants who had experienced stigma were at high risk of developing suicidality compared to those without history of stigma, ($p < 0.01$). In adjusted models patients with depression and stigma were 2 to 3 times more likely to have suicidality. The findings relating depression and suicidality replicate that of the study done in United States of America [43] .Therefore screening depression and suicidality in HIV/AIDS patients could reduce morbidity and mortality with improved quality of life. However there is some evidence that suicidality in HIV/AIDS may have other contributing factors since significant proportion of patients remained actively suicidal after treating depression [44]

4.1. LIMITATIONS OF THE STUDY

- This study was conducted in an urban setting; majority of the participants were living in the urban areas, therefore the results may not be generalizable because participants in the rural area may not necessarily share the social and demographic characteristics as in urban setting.
- The fact that the study was a cross sectional, longitudinal studies could give more light on the associations found between suicidality, and HIV/AIDS.
- Financial constraints due to small budget allocated to cover all costs of the study. I had to supplement budget deficit from my own sources.

CHAPTER FIVE

5.0. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

- Worldwide the literature has shown suicidality is common in PLHA.
- The study on suicidality is the first of its kind in Tanzania.
- Literature has shown the association between the stages of HIV/AIDS and the risk to develop suicidality.
- This study found that suicidality was associated with depression and stigma
- There is a need to put the policies in place to guide mental health service implementation, specifically for suicidality in HIV care and treatment clinics.

5.2. Recommendations

- It is recommended to include screening, treatment and referral of suicidality as mental health routine practice in HIV clinics.
- Community education on HIV related stigma, addressing its potential effects on mental health.
- Conduct longitudinal studies to compare the magnitude of suicidality and depression among HIV and non HIV outpatient clinics attendees in similar settings to establish causal links between depression HIV stigma and suicidality.

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7.0. APPENDICES

7.1. CONSENT FORM (ENGLISH VERSION)

Consent to participate in the study titled "**Magnitude and Determinants of Suicidality among HIV-positive outpatients in Mbeya City"**

Greetings! My name is Paul Sarea, a postgraduate student at MUHAS, investigating on the Magnitude and Determinants of Suicidality among HIV-positive outpatients in Mbeya City Tanzania.

The purpose of the study: To determine Magnitude and Determinants of Suicidality among HIV-positive outpatients in Mbeya City Tanzania.

What participation involves:

If you agree to participate in the study, you will be interviewed, and a detailed clinical history regarding your mental health will be requested. No invasive procedure will be performed in your body.

Confidentiality:

All information collected on questionnaires will be entered into computer with special identification number. The questionnaires will be handled with greater secrecy in order to maintain confidentiality.

Risks: There is no risk associated with participation in this study.

Right to withdraw and alternatives: Taking part in this study is completely a voluntary choice. If you choose not participate in the study, you will continue to receive all services that are normally provided in the hospital.

Benefits: If you agree to take part in this study, there will be no direct benefits to you. However the overall study will be of benefit to other persons with HIV with patients with suicidality now and in the future.

In case of any injury: We do not expect any harm.

Whom to contact: If you have any question about the study or in case of further information, you can contact Paul Sarea phone number 0755 866363. If you have questions about your rights as a participant you may contact my supervisor Dr Jessie

Mbwambo or Prof M. M. Aboud, Chairman of MUHAS Research and Publications Committee.

P.O.BOX 65001 Dar es Salaam. Tel 2150302-6

Signature

Do you agree?

Participant agrees…….. Participant does NOT agree……

I …… have read and understood the content of this form .My questions have been answered and I voluntarily agreed to participate in this study.

Signature of participant…….

Signature of witness…… Date of signed consent…….

7.2. QUESTIONNAIRE- ENGLISH VERSION

Please fill the answer that is correct for you on the box on your right.

1. GENERAL INFORMATION

Date of interview: {...../...../2011 Questionnaire serial No: .....

Name of interviwer: .....

II. DEMOGRAPHIC CHARACTERISTICS OF RESPONDENT

1**.** Number of interviewee:.....

2. Age of the interviewee in years.....

3. Sex of respondent

1. Male
2. Female

4. What is your marital status?

1. Married
2. Unmarried
3. divorced/separated
4. Widow
5. Cohabiting

5. With whom do you live with? (for each option indicate 1=yes, 2=no)

1. Alone
2. Spouse
3. Children
4. Relatives

6 . In which district do you live in Mbeya?

1. Mbeya urban
2. Mbeya rural
3. Others, mention:.....

7. What is your religion?

1. Practicing Christian (meaning attended a religious function in the past 3 months)
2. Practicing Moslem ((meaning attended a religious function in the past 3 months)
3. Non-practicing Christian
4. Non-practicing Moslem
5. No religious afiliation
6. Others(specify)

8(a). What is your highest level of education?

1. Never went to school
2. Primary school
3. Secondary school
4. College/University
5. Postgraduate/Masters
6. Adult education

8(b). How many years did you spend in school at this level of your education?

9(a). What is your main source of income

1. No source of income
2. From friends/family
3. From rent collection
4. From pension
5. From savings/loans
6. From employment/self employment
7. Other source mention: _____

9(b) If employed, what do you do to earn an income?

1. Self employed agricultural work
2. Wage earning agricultural work
3. Self employed business/trade Mention: _____
4. Wage earning unskilled job (paid per day or per week) Mention: _____

5. Wage earning skilled job (paid per day or per week) Mention: _____
6. Salary earning unskilled job (paid per month) Mention: _____
7. Salary earning skilled/professional job (paid per month) Mention: _____
8. House wife
9. Student
10. Others(specify):

9(c) In your current home, you live in

1. Rented accommodation
2. Live with relative that rents the accommodation
3. Live in home that you or your partner owns
4. Live in home with relative that owns the accomodation

9(d) Does your household have (response options 1= Yes; 2= No)

1. Electricity? Yes...../ No.....
2. A radio? Yes...../ No.....
3. A television? Yes...../ No.....
4. A refrigirator? Yes...../ No.....

9(e) Does any member of you household own (response options 1= Yes; 0= No)

1. A bicycle? Yes...../ No.....
2. A motorcycle? Yes...../ No.....
3. A car? Yes...../ No.....

9(f) Does your household have enough food to eat, or do you sometimes or frequently have not enough food to eat?

1. Always enough
2. Sometimes not enough
3. Frequently not enough
4. Always not enough
8. Do not know

9(g) What is the main source of drinking water for members of your household?

1. Piped water into house/yard/plot
2. Public/private tap water
3. Well water in yiur residence/yard/plot
4. Public/private well
5. Spring water

6. River/pond or dam water
7. Rainwater

9(h) What kind of toilet facility does your household have?
1. Own flush toilet
2. Shared flush toilet
3. Pit latrine that is ventilated
4. Traditional pit latrine
5. no facility

9(i) Could you describe the main material of the floor of your home?
1. Natural earth floor
2. Rudimentary floor with wooden planks
3. Finished floor with cement screed
4. Finished floor with ceremaic tiles
5. Finished floor with parquet/polished wood

10. Do you remember when you tested and became aware of HIV status?

(a) Yes/No……
(b) One week ago
(c) One month ago
(d) One year ago
(e) More than one year ago

11. Are you taking ARVs?
(a)Yes
(b) No……..

If Yes

(c) When did you start using ARVs? Date/month/year ……. /……/…….

12. Interviewee HIV/AIDS current WHO clinical stage (clinical case notes)
(a) Stage 1 ……
(b) Stage 2 ……
(c) Stage 3 ……
(d) Stage 4 ……

13. When did you start attending this service for the first time?

(a) This is my first time
(b) One week ago
(c) One month ago
(d) Six months
(e) One year ago
(f) More than one year ago

14. Do you know the HIV infection status of your current partner?
(a) Positive
(b) Negative
(c) Don't know

15. In the past six months, have you had your close relative (spouse, parent, grandparent, child) passed away?
(a) No
(b) Yes

16. Interviewee current (last six months) CD4 count …… (see the clinical notes)

17. Have you used any of the following drugs (within past one month)?

(a) Alcohol	yes……..no……
(b) Heroin	yes…….no…….
(c) Methadone	yes…….no……..
(d) Barbiturates	yes…….no……..
(e) Valium	yes…… no……
(f) Cocaine	yes ……no……
(g) Cannabis	yes…… no……
(h) Petrol	yes…….no…….

18. Have you ever been admitted for Physical illness (in the past one month) or Psychiatric illness (prolonged treatment with antipsychotics for six months or more)?
(a) Psychiatric illness
(b) Physical illness (mention)……
(c) Never

19. Have you ever stigmatized yourself or by others after known to be HIV positive?
(a) Yes
(c) No

20. If question number 19 is yes, in which way this happened to you?
(a) It was difficult to tell others about my HIV status
(b) Feel dirty after HIV infection
(c) Feel ashamed to have HIV
(d) It is my own fault having HIV infected
(e) Hide your HIV status

(f) Lost your job after having diagnosed with HIV
(g) Relatives and others stopped visiting you
(h) Stopped sharing social life you after knowing your HIV positive

III. MAGNITUDE OF DEPRESSION (PHQ-9)

Over the past two weeks how often have you been bothered by the following problems?

21 .Little interest or pleasure in doing things

1. Not at all
2. Several days
3. More than half the days
4. Nearly everyday

22 .Feeling down, depressed, or hopeless

1.Not at all
2.Several days
3.More than half the days
4.Nearly everyday

23 .Trouble falling or staying asleep, or sleeping too much

1.Not at all
2.Several days
3.More than half the days
4.Nearly everyday

24. Feeling tired or having little energy

1.Not at all
2.Several days
3.More than half the days
4.Nearly everyday

25 .Poor appetite or overeating

1.Not at all
2.Several days

3.More than half the days

4.Nearly everyday

26. Feeling bad about yourself, or that you are a failure or have let youself or your family down

1.Not at all

2.Several days

3.More than half the days

4.Nearly everyday

27.Trouble concentrating on things, such as reading the newspaper or watching TV

1.Not at all

2.Several days

3.More than half the days

4.Nearly everyday

28.Being so fidgety and restless that you have been around a lot more than usual

1.Not at all

2.Several days

3.More than half the days

4.Nearly everyday

29.Thought you would better be dead or of hurting yourself in some way

1.Not at all

2.Several days

3.More than half the days

4.Nearly everyday

30. If you checked off any problems, how diificult have these problems made it for you to do your work, take care of things at home, or get along with other people?

1. Not difficult at all
2. Somewhat difficult
3. Very difficult

4. Extremely difficult

IV. MAGNITUDE OF SUICIDALITY (MINI)

	In the past month did you :	Yes	No
31.	Think that you would be better dead		
32.	Want to harm yourself?		
33.	Think about suicide?		
34.	Have a suicide plan?		
35.	Attempt suicide?		
36.	**In your lifetime** Did you ever make a suicide attempt?		

37 (A). Is at least one of the above coded yes?	
37 (B) .IF YES SPECIFY THE LEVEL OF SUICIDE RISK AS FOLLOWS (a) 31 or 32 or 33 = YES : LOW	
(b) 33 or(34 + 36) = YES : MODERATE	

(c) 36 or 35 or (33 + 36) = YES : HIGH	

7.3. CONSENT FORM (KISWAHILI VERSION)

Ukubwa na vichocheo vya fikra na tabia za kupanga au kujaribu kujiua kwa wagonjwa wenye maambukizi ya virusi vya ukimwi wanaohudhuria cliniki katika jiji la Mbeya.

Salaam! Jina langu ni Dr Paul Sarea, natokea Chuo Kikuu Cha Sayansi za Afya na Tiba-Muhimbili.Nafanya Utafiti kuhusu Ukubwa na vichocheo vya fikra na tabia za kupanga au kujaribu kujiua kwa wagonjwa wenye maambukizi ya virusi vya ukimwi wanaohudhuria cliniki katika jiji la Mbeya,Tanzania .

Madhumuni ya utafiti huu

Madhumuni ya utafiti huu ni kufahamu Ukubwa na vichocheo vya fikra na tabia za kupanga au kujaribu kujiua kwa wagonjwa wenye maambukizi ya virusi vya ukimwi wanaohudhuria cliniki katika jiji la Mbeya,Tanzania.

Jinsi ya kushiriki

Kama utakubali kushiriki, utaulizwa maswali kuhusu maisha na afya yako.

Utunzaji wa siri

Taarifa zote zitatunzwa kwa siri kwa kutumia herufi au nambari badala ya jina la mgonjwa.

Madhara /Athari

Hakuna madhara au athari yoyote inayotegemewa kutokea kutokana na ushiriki wako katika uatafiti huu.

Uhuru wa kushiriki

Una uhuru wa kushiriki au kutoshiriki kwenye utafiti huu, pia unaweza kujitoa wakati wowote. Kama utachagua kutoshiriki, utaendelea kupata huduma zote unazostahili katika hospitali hii kama kawaida.

Faida ya utafiti

Kama utakubali kushiriki katika utafiti huu wewe binafsi kama utagundulika na matatizo na fikra au mawazo ya kutaka kujiua au kujaribu kujiua utapatiwa rufaa kwenda kuonana na wataalamu wa afya ya akili.Matokeo ya utafiti huu pia yatasaidia kupanga na kuboresha matibabu ya wagonjwa wengine ambao hawajashiriki utafiti huu,kwa sasa na baadaye.

Taarifa

Endapo unahitaji kupata maelezo kuhusu haki zako au taarifa zaidi ,wasiliana na Paul Sarea, Mtafiti, kupitia namba ya simu 0755 86 63 63 au Dr Jessie Mbwambo au Prof M M Aboud Mwenyekiti wa Kamati ya Utafiti, MUHAS S.L.P 651001,Dar es salaam, Simu 2150302-6

Je unakubali kushiriki kwenye utafiti? weka alama ya vema(√)

Ndiyo..... **hapana.....**

Mimi ....., nimeelezwa na nimesoma maelezo haya hapo juu na kuyaelewa na Ninakubali kwa hiari yangu kushiriki kwenye utafiti huu

Sahihi ya mgonjwa .....

Sahihi ya ndugu/shahidi .....

Sahihi ya Mtafiti ..... . Tarehe……

7.4. QUESTIONNAIRE (KISWAHILI VERSION)

Tafadhali jaza jibu ambalo unaona ni sahihi kwako katika viboksi.

1 .MAELEZO YA AWALI

Tarehe ya mahojiano: {...../...../2011} Namba ya dodoso: .....

Jina la msahili: .....

2. MAELEZO BINAFSI

1**.** Namba ya mshiriki anayehojiwa:.....

2. Umri wake (Miaka) .....

3. Jinsia ya mshiriki

1. Mume
2. Mke

4.Nini hali yako ya ndoa

1. Nimeoa/Nimeolewa
2. Sijaoa/Sijaolewa
3. Tumehachana/Tumetengana
4. Mjane
5. Naishi na mwanamke/bwana

5.Hapo nyumbani unaishi na nani?

1. Peke yangu
2. Mke/Mume
3. Watoto
4. Ndugu
5. Nyingine(taja).....

6. Je unahishi wilaya gani?/Unaishi wapi?

1. Mbeya mjini

2. Mbeya vijijini
3. Wilaya nyingine
4. Nyingine (taja) :.....

7. Je wewe ni muumini wa dini gani?

1. Mkiristo (ukimaanisha ushaudhulia shughuli za kanisa miezi mitatu iliopita)
2. Muislamu ((ukimaanisha ushaudhulia shughuli za msikiti miezi mitatu iliopita)
3. Mkiristo asiyeenda kanisani
4. Muislamu asiyeenda msikitini
5. Sina dini
6. Nyingine(taja)

8(a). Je una kiwango gani cha elimu?

1. Sijasoma
2. Elimu ya msingi
3. Elimu ya sekondari
4. Elimu ya chuo/chuo kikuu
5. Nina shahada ya pili/sitashahada
6. Elimu ya watu wazima

8(b). Kwa kiwango chako cha juu cha elimu ulitumia muda gani katika masomo?

9(a). Nini chanjo chako cha mapato?

1. Sina chanzo cha mapato
2. Kutoka kwa rafiki/familia
3. Kutoka kwenye makusanyo ya kodi
4. Kutoka kwenye pensheni(akiba ya uzeeni)
5. Kutoka kwenye akiba/mikopo
6. Kutoka kwenye ajira/ajira binafsi

7. Nyingine (taja): _____

9(b) Kama umeaajiriwa/Jiajiri unafanya kazi gani?

1. Shughuli binafsi za kilimo
2. Shughuli binafsi za kilimo
3. Biashara binafsi
4. Kibarua(Malipo kwa siku/wiki)
5. Malipo kwa utaalamu (malipo kwa siku/wiki)
6. Malipo ya mshahara kwa zisizo za ujuzi kwa mwezi
7. Malipo ya mshahara wa kiujuzi kwa mwezi
8. Mama/baba wa nyumbani
9. Mwanafunzi
10. Nyingine (taja):

9(c) Nyumbani kwa sasa je unahishi kwenye

1. Nyumba ya kupanga?
2. Na ndugu kwenye nyumba kupanga
3. Unahishi kwenye ya kwako mwenyewe au wewe na mwenzio
4. Kwenye nyumba ya ndugu

9(d) Je nyumba unayohishi ina (sema 1= ndio; 0= hapana)

1. Umeme? Ndio...../ Hapana.....
2. Redio? Ndio...../ Hapana.....
3. Runinga? Ndio...../ Hapana.....
4. Jokofu? Ndio...../ Hapana.....

9(e) Does any member of you household own (response options 1= Yes; 0= No)

1. Baisikeli? Ndio...../ Hapana.....
2. Pikipiki? Ndio...../ Hapana.....
3. Gari? Ndio...../ Hapana.....

9(f) Je katika familia mnapata chakula cha kutosha au muda mwingine akitoshi?

1. Kinatosha muda wote
2. Kuna muda hakitoshi
3. Mara nyingi hakitoshi
4. Muda wote akitoshi

5. Sijui

9(g) Je mnapata wapi ya kunywa katika kaya yenu?

1. Maji ya bomba ya nyumba/uani
2. Maji ya bomba la jumuiya
3. Maji ya kisima ndani ya makazi
4. Maji ya kisima cha jumuiya
5. Maji ya chemchemi
6. Maji ya mto/bwawa
7. Maji ya mvua

9(h) Je nyumba yenu ina choo cha aina gani?

1. Choo cha maji cha kuvuta cha binafsi
2. Choo cha maji cha kuvuta cha kushirikiana
3. Choo cha shimo cha kisasa
4. Choo cha shimo cha kizamani
5. Hatuna uduma ya choo

9(i) Je, sakafu ya nyumba yenu ni ya aina gani?

1. Ya udongo kawaida
2. Ya mbao za kizamani
3. Imepigwa simenti
4. Ina vigae/tailizi
5. Imemaliziwa na mbao zilizo nakishiwa

10.(A) Je unakumbuka tarehe au mwezi ulipopima kujua hali yako ya maambukizi ya virusi vya ukimwi?

(a) Ndiyo
(b)Hapana

10.(B) Kama kipengele 10 A hapo juu ni ndiyo,taja ni lini?

(a) one week ago
(b) one month ago
(c) six months ago
(d) one year ago
(e) More than one year ago

11. (A) Je umeshaanza kutumia dawa za kupunguza makali ya virusi vya ukimwi?

(a) Ndiyo kama jibu ni ndiyo ni lini?
(b) Hapana

11.(B) Kama kipengele 11(A) hapo juu ni ndiyo
Ulianza kutumia lini? Tarehe/mwezi/mwaka …../……./…

12. Hatua ya HIV/AIDS katika mwili wa mhojiwa(kufanyiwa tathmini na daktari au rekodi ya jalada lake

(a) hatua ya 1
(b) hatua ya 2
(c) hatua ya 3
(d) hatua ya 4

13.Je ni lini ulianza kuhudhuria cliniki hii kwa mara ya kwanza?

(a) Hii ndiyo mara yangu ya kwanza
(b) Juma moja lililopita
(c) Mwezi mmoja uliopita
(d) Mwaka mmoja uliopita
(e) Zaidi ya mwaka mmoja uliopita

14. Je unafahamu hali ya maambukizi ya mpenzi wako wa sasa?

(a) Anaishi na virusi vya ukimwi
(b) Hana virusi vya ukimwi
(c) Sijui

15. Katika kipindi cha miezi sita iliyopita ulishawahi kufiwa na ndugu (mume,mke,baba,mama,mtoto) wa karibu?

(a)Ndiyo

(b)Hapana

16.Kiwango cha CD4 ya mhojiwa ..... (ndani ya miezi sits iliyopita) angalia jalada

17. Je ulitumia kilevi au dawa yoyote kati ya hizi zifuatazo? (ndani ya mwezi moja uliopita) Jibu ndiyo= 1, Hapana= 2, Kama ni ndiyo andika kiasi kinachotumika kwa siku

(a) Pombe	Ndiyo..... Hapana.....
(b) Heroin	Ndiyo.....Hapana.....
(c) Methadone	Ndiyo.....Hapana.....
(d) Barbiturates	Ndiyo.....Hapana.....
(e) Valium	Ndiyo.....Hapana.....
(f) Cocaine	Ndiyo.....Hapana.....
(g) Cannabis	Ndiyo.....Hapana.....
(h) Petrol	Ndiyo.....Hapana.....

18 .Je umeshawahi kutibiwa au kulazwa kwa magonjwa yafuatayo?
(a) Ugonjwa wa akili au kuchanganyikiwa na kutumia dawa kwa zaidi ya miezi 6?
(b) Magonjwa mengine (ndani mwezi moja uliopita)?
(c) Hapana

19. Je umeshawahi kujitenga au kuhisi ktengwa na jamii baada ya kuambukizwa vvu?
(Maelezo mafupi kuhusu unyanyapaa) kama hapana nenda swali la 20
(a) Ndiyo
(b) Hapana

20. Kama jibu la swali la hapo juu ni ndiyo ,ni kwa namna gani hiyo hali ilitokea?
(a) Ilikuwa vigumu kuwaambia wengine kuhusu hali yangu
(b) Ulijihisi kuwa mchafu kuwa na vvu
(c) Ulijiona hufai au aibu kuwa na vvu
(d) Ulijihisi ni makosa binafsi kuambukizwa vvu
(e) Ulificha hali yako kuwa una vvu
(f) Ulipoteza kazi baada ya kujulikana unaishi na vvu
(g) Watu waliacha kukutembelea baada ya kujua una vvu
(h) Waliogopa kushirikiana na wewe baada ya kujua una vvu

3. UKUBWA WA DALILI ZA MSONONO (PHQ-9)

Kwa juma mbili zilizopita, mara ngapi umesumbuliwa na matatizo haya: Weka alama √ kuonyesha jibu lako.

21.Mwelekeo mdogo au kukosa raha kufanya vitu

1. Hapana kabisa

2. Siku kadhaa
3. Zaidi ya nusu siku hizi
4. Karibu kila siku

22.Kujisikia kama huwezi kuchangamka, huzuni au kukosa tumaini

1.Hapana kabisa
2.Siku kadhaa
3.Zaidi ya nusu siku hizi
4.Karibu kila siku

23.Tatizo kupata usingizi au tatizo kuendelea kulala baada ya usingizi ama kula kupita kiasi

1.Hapana kabisa
2.Siku kadhaa
3.Zaidi ya nusu siku hizi
4.Karibu kila siku

24.Kujisikia kuchoka au kuwa na nguvu kidogo

1.Hapana kabisa
2.Siku kadhaa
3.Zaidi ya nusu siku hizi
4.Karibu kila siku

25.Kupunguwa kwa hamu ya kula au kula kupita kiasi

1.Hapana kabisa
2.Siku kadhaa
3.Zaidi ya nusu siku hizi
4.Karibu kila siku

26.Kujisikia vibaya mwenyewe, au kusikia kama umeshindwa, au umejishusha, au umeshusha chini familia yako

1.Hapana kabisa
2.Siku kadhaa

3.Zaidi ya nusu siku hizi

4.Karibu kila siku

27.Tatizo kwenye kutuliza akili kwenye vitu kama kusoma gazeti au kangalia runinga

1.Hapana kabisa

2.Siku kadhaa

3.Zaidi ya nusu siku hizi

4.Karibu kila siku

28.Kusogea au kuzungumza polepole sana hata ingeweza kuonekana kwa watu wengine. Ama kinyume kuwa na mashaka/wasiwasi au kutotulia kiasi hata umekuwa ukitembea tembea sana kuliko kawaida

1.Hapana kabisa

2 Siku kadhaa

3 Zaidi ya nusu siku hizi

4 Karibu kila siku

29.Fikira kwamba ni heri ukifa, au fikira za kujiumiza kwa njia fulani?

1.Hapana kabisa

2.Siku kadhaa

3.Zaidi ya nusu siku hizi

4.Karibu kila siku

30.Kama umejibu maswali yote, kwa kiasi gani haya matatizo yamefanya vigumu kufanya kazi zako, kutunza vizuri vitu nyumbani au kuelewana na watu wengine?

1. Sio vigumu hata kidogo
2. Vigumu kiasi
3. Vigumu sana
4. Kwa shida zaidi

4. HALI YA KUTAKA KUJIUA: (MINI)

	Katika mwezi uliopita, je:	ndiyo	hapana
31	Ulifikiria kwamba ni bora ungekufa?		
32	Ulitaka kujidhuru?		
33	Ulifikiria juu ya kutaka kujiua?		
34	Ulikuwa na mipango ya kujiua?		
35	Ulijaribu kujiua?		
36.	**Katika maisha yako,je** Ulishawahi, wakati wowote, kujaribu kujiua?		
37 (A)Je,angalau kipengele **kimoja** kati ya vya hapo juu,kimejibiwa **ndiyo**?			
38(B) KAMA NDIYO, **ELEZA** KIWANGO CHA HATARI YA KUJIUA KAMA IFUATAVYO:			
(a) 31au 32 au 33 = NDIYO : HATARI NDOGO			
(b) 33 au (34 +36) = NDIYO : HATARI YA KATI			
(c) 36 au 35 au (33 + 36) = NDIYO : HATARI KUBWA			