EVALUATION OF QUALITY OF LIFE OF PEOPLE LIVING WITH HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION WHO ARE ON ANTIRETROVIRAL TREATMENT ATTENDING CLINIC IN DAR ES SALAAM.

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Master of Science in Project Management Monitoring and Evaluation in Health Dissertation.

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By

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A Dissertation submitted in (partial) Fulfillment of the Requirements for the Degree of Master of Science in Project Management Monitoring and Evaluation in Health of

Muhimbili University of Health and Allied Sciences.

October 2021

CERTIFICATION

The undersigned certify that he has read and hereby recommend for acceptance by the Muhimbili University, a dissertation entitled "Evaluation of quality of life of people living with HIV infection who are on antiretroviral treatment'' in fulfillment of the requirements for the degree of Master of Science in Project Management Monitoring and Evaluation in Health of Muhimbili University of Health and Allied Sciences.

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Prof. Phare G.M. Mujinja, BA (Hons), CIH, MPH, MA, (Econ), PhD, (Supervisor)

Date………………………………………

DECLARATION AND COPYRIGHT

I, Amana Juma, do hereby declare that this dissertation is my own original work and that it has not been presented in any other university for a similar or any other degree award.

Signature………………………………… Date…………………………………………

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DEDICATION

This dissertation is dedicated to my brothers and sisters. My daughters Salha and Samira and my sons Imran and Ilyasaa and special dedication to my beloved husband Dr. Mohammed Abdallah Mnacho spiritual support, and their encouragement during my fieldwork motivated me to perform my work successful.

ABSTRACT

Background

Health related Quality of life for people living with HIV infection is a big problem in most of the society in the developing countries. In many settings, poor quality of life is associated with lower immune response non-adherence, poor mental health and greater disease severity. However, many studies have looked the effect of antiretroviral drug (ARV) on general morbidity, mortality, cost and hospitalization. The biomedical effect of ARV has not been linked to the quality of life on the patients receiving antiretroviral in most developing countries.

AIM: The study aimed to evaluate quality of life of people living with human immunodeficiency virus (HIV) receiving antiretroviral treatment attending clinic in Dar es Salaam.

METHODOLOGY: A cross-sectional retrospective pre and post descriptive design was used to answer the research questions. Quantitative data approach was employed to collect required data. About 245 participants attending antiretroviral treatment (ARV) clinic in Mwananyamala regional referral hospital for a period of six weeks. A standard questionnaire (WHO QOL-HIV BREF) tool used to collect information.

Data was analyzed by using statistical package of social science (SPSS) version 20. Descriptive statistic measures of mean and standard deviation was used to perform data analysis.

RESULTS : A total of two hundred and forty five (245) patients living with HIV were interviewed. Majority of the respondents were female comprising 159 (64.9%) while males were about 86 (35.1 %). Significant proportion of the study participants were in good health condition comprising 192 (78.4%) and 14 (5.7%) were in a poor of the health situation.

Quality of life of the studied subjects improved following ARTs treatment in almost all domains except social domain. Physical domain with average mean score of 2.7 higher after treatment, psychological domain particularly in depression has mean score of

2.1higher than before treatment, Economic activity with the average mean score improved to 2.9 after treatment. Social domain the average mean score of 2.7 was equal to before treatment hence does not improve after ART initiation.

CONCLUSION

The respondents reported improved in psychological functioning, mental and emotional wellbeing, while receiving ARVs than before started ARV treatment.

In regarding, physical functioning respondents receiving ARVs were on average better off, after being treated by ARVs than before.

Regarding sexual performance, most of the respondents were less functional after starting ARV treatment.

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LIST OF ABREVIATION

AACTG   Adult AIDS Clinical Trials Group

AIDS   Acquired Immune Deficiency Syndrome

ART   Antiretroviral therapy

CART   Combined antiretroviral therapy

CTC   Care and Treatment Clinic

HIV   Human immunodeficiency virus

HRQoL   Health related quality of life

MUHAS   Muhimbili University of health allied sciences

WHO   World health organization

WHOQOL   World health organization quality of life

DEFINITION OF TERMS

Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. [1]

Health-related quality of life is a multidimensional component of the patient reported outcome, which involves patients evaluation of themselves based on perception of a disease and/or its treatments [2]

Quality of life defined as individuals perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, standards, expectations and concerns [3]

Self-esteem means is a one's overall evaluation or appraisal of one's own worth. It refers to the extent to which people like themselves in light of their assets and limitations, successes and failures, and their ability to cope with problems [4]

Social support is the physical and emotional comfort given to or received from family, friends, co-workers and others [4]

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Human immunodeficiency virus (HIV) / Acquired immunodeficiency syndrome (AIDS) is a chronic infection that affects not only the patients' physical condition, but also their social relations, mental health and financial aspects [5]

HIV infection and its associated pandemic of Acquired Immune Deficiency Syndrome (AIDS) have burdened the population with serious public health and socioeconomic challenges over the years. [6]

The human immunodeficiency viruses (HIV) are of two species of Lent virus a subgroup of retrovirus that infects humans. Overtime, they cause acquired immunodeficiency syndrome (AIDS) a condition in which progressive failure of the immune system allows life-threatening opportunistic infections and cancers to thrive [7]. Without treatment, average survival time after infection with HIV is estimated to be 9 to 11 years, depending on the HIV subtype [8]. In most cases, HIV is a sexually transmitted infection and occurs by contact with or transfusion of blood, pre-ejaculate, semen, and vaginal fluids. Research has shown that HIV is untransmitable through condom less sexual intercourse contacts if the HIV-positive partner has a consistently undetectable viral load [9]. HIV infects vital cells in the human immune system, such as helper T cells macrophages, and dendritic cells [10]. HIV infection leads to low levels of $CD4^+$ T cells through a number of mechanisms, including pyroptosis of abortively infected T cells [11].

The management of HIV/AIDS normally includes the use of multiple antiretroviral drugs in an attempt to control HIV infection. There are several classes of antiretroviral agents that act on different stages of the HIV life cycle.

The use of multiple drugs that act on different viral is known as highly active antiretroviral therapy (HAART). HAART help to reduce the patient's total burden of HIV, maintains function of the immune system, and prevents opportunistic infections that often lead to death [12]. HAART also prevents the transmission of HIV between serodiscordant same sex and opposite sex partners as long as the HIV-positive partner maintains an undetectable viral load [13].

Treatment has been so successful that in many parts of the world, HIV has become a chronic condition in which progression to AIDS is increasingly rare. World Health Organization (WHO) recommends offering antiretroviral treatment to all patients with HIV [14]. Because of the complexity of selecting and following a regimen, the potential for side effects, and the importance of taking medications regularly to prevent viral resistance, such organizations emphasize the importance of involving patients in therapy choices and recommend analyzing the risks and the potential benefits [14].

The impact of HIV infection on the dimensions of quality of life, including physical health and symptoms, treatment impact, emotional distress, health concerns, body change, social relationships, and stigma, has emerged as a key issue for persons living with HIV. Quality of life is one of the key factors to evaluate the health wellbeing of PLWH, and its improvement is one of the important goals of treatment. Assessing the QOL can provide an accurate assessment of how patient life is affected by diseases and treatments [15].

Study done in Brazil found that the quality of life of people living with HIV/AIDS presents losses, mainly in the financial, confidentiality and general function of the body satisfaction with life (16). Hipolito et.al showed that there is a strong relationship between the general perception of QoL and degree of satisfaction with health [17]. In Ethiopia Surur, et.al showed that all the domains of health related quality of life was found to be significantly associated with the World Health Organization clinical stage [18]. Improvement in antiretroviral therapy (ART) has led to increased survival in people living with HIV (PLWH). Despite these improvements, HIV infection and its related problems still have a notable impact on health-related quality of life (HRQOL), even in people who are virally suppressed because of taking ART [19]. Supporting PLWH achieve positive effects about their HRQOL requires understanding its determinants in this population.

1.2 **Problem Statement**

Health related Quality of life for people living with HIV infection is a big problem in most the societies in the developing countries. About 20% of patients who receive ART treatment have been reported to not improve their quality of life [20].

In many settings, poor quality of life is associated with lower immune response non-adherence, poor mental health and greater disease severity [21]. Other factors that are associated with health related quality of life (HRQOL) among PLWH, including ageing, immunological status, the presence of symptoms, treatment adherence, depression, social support and employment [22, 23].

A study done in Tanzania shows that, the main barrier that hinder QOL is stigma, while in other settings depression, un employment, poverty, nutrition are the core factors in affecting QOL [24-26].

Antiretroviral therapy (ART) treatment in one way or another changed the impact of opportunistic infection, hospitalization, mortality and cost of treatment among other factors. However, many studies have looked at the effect of ARV on general morbidity, mortality, cost and hospitalization. REF

The biomedical effect of ART has not been linked to Health Related Quality of life (QOL) to patients receiving ART treatment in most developing countries [27].

This study therefore intended to explore the change in health related to quality of life to PLWHIV specifically on their psychological, physical and social domains. The study focused on before and after the patients started the ART treatment. The focus on this study is important because some patients wellbeing depends on reduction on viral rod density, which is associated with the individual functions.

1.3 Conceptual frame work

The framework that adopted from WHO domains, I changed and only three domains are included in the study that are related to answer the research questions.

These domains are physical functions, psychological functions and social relationship. Physical health domain that was used to assess sleep pattern and rest. Psychological domain used to measure positive feelings, memory and concentration, self-esteem, bodily image and appearance, suicide and depression. The social relationship domain measured personal relationships, and sexual activity.

The model for this research study is assuming that health related quality of life being (dependent variable), which is determined by (Independent variables).

Figure 1.1: conceptual framework.

BEFORE   TREATMENT   AFTER

1.4 Rationale of the study.

Assessing health-related quality of life (HRQOL) is useful for documenting the patient's perceived burden of a chronic disease. Quality of life (QOL) is an important outcome indicator for healthcare decision-making and intervention effects evaluation, it is therefore of pivotal significance to know the extent and impact of HIV intervention programs on the quality of life of patients living with HIV, who are on antiretroviral

treatment. The study shall provide knowledge and information about HIV/AIDS that should be used by counsellors to manage patients and find ways to live comfortable life. In addition, the results may be used to plan how to improve the quality of life on the patients.

1.5 Research Questions

1.5.1 Main Research question

What are the changes of health related quality of life before and after among patients receiving ART treatment?

1.5.2 Specific research questions.

1. To what extent has social relationship changed before and after ART treatment?

2. To what extent has psychological changed before and after ART treatment?

3. To what extent has physical health changed before and after ART treatment?

4. How was economic activity of patients changed before and after ART treatment?

1.6 Objectives

1.6.1Broad objective

Evaluation of quality of life of people living with human immunodeficiency virus (HIV) infection who are on antiretroviral treatment attending clinic in Dar es salaam.

1.6.2.   Specific objectives

1. To determine the social relationship changed before and after ARV treatment
2. To determine the psychological changed before and after ARV treatment
3. To determine physical health changed before and after ARV treatment
4. To find out changes in participation in economic activity before and after treatment.

CHAPTER TWO

2.0 LITRATURE REVIEW

HIV disease is a chronic debilitated condition that affects people living with HIV (PLWHIV) to have potential problem in terms of their health including physical, mental that is one part may affect overall living as well being of a patient. In the management of these patients, one of the important aspects is the use of ARTs that aimed to not only improving physical health but also in turn overall quality of patient life. The use of HAART has become the cornerstone of the clinical intervention to prevent transmission and slow progression of HIV infection in individuals living with HIV/AIDS [28].

In Tanzania, the use of ARTs was initiated since 2004 with the purpose of reaching all patients in order to improve not only physical health but also general wellbeing of these patients living with HIV.
High level of ART adherence prevent the development of drug resistance and improves the quality of life and makes the patient live longer and healthier.

The use of ART has resulted in the development of HIV/AIDS to a chronic and manageable disease that improve survival, reducing the occurrence of HIV-related opportunistic infections, and lead to significant improvement in the patients QOL [29]. Therefore, the introduction of highly active antiretroviral therapy (HAART) has substantially improved the survival of persons infected with HIV however these drugs are complex often makes maintaining adherence over the long term challenging. Assessment of quality of life has become an important outcome measure in the management, and can be assessed by using domain of QOLHIV these are physical, psychological, level of independence, social relationships, environment, and religious/personal beliefs, and general health perception.

Some literature show that assessment of general population in PLWHA may be more likely to develop mental disorders like depression or anxiety and major depression is the commonest psychiatric problem occurring associated to the disease compared to non HIV individuals [30].

2.1 Psychological and ARV use treatment.

A study in Ethiopia shows that PLWHA are more likely to develop mental disorders like depression or anxiety and major depression is the commonest psychiatric problem occurring associated to the disease [31].

Co morbid psychiatric illnesses like depression are common in HIV-infected patients [32]. Which may occur due to in younger age, unemployment, lack of health insurance, low CD4+ cell counts, HIV-related symptoms, not having a partner, poor quality of social support, and use of non-injection drugs were significant predictors of depression [33].

Treatment of depression in patients with HIV disease may not prolong life but can lower the risk of suicide and improve QOL [34]. Attempted suicide and suicidal ideation are complex clinical issues associated with life-threatening conditions such as HIV infection.

Coping with treatment influence QOL in people living with HIV since it involves the cognitive and behavioral effort to tolerate, reduce demands that challenge a person's resources. Individuals who confronted stress and behavior-modifying approaches had a significantly better QOL than those not using such coping skill. Coping by denial is associated with a significantly lower QOL in a previous study. Although denial has been shown to be an effective coping method in non-HIV settings, the preponderance of studies in HIV settings has suggested otherwise [35].

Denial has been shown to correlate with low self-esteem and depression in HIV patients and hence poor quality of life. It is therefore important that psychosocial aspects of HIV-positive patients should be well addressed in the management of patients since is associated with a large measure of stress and depression that strongly influence HRQOL in people living with HIV [36].

In Iran, a study reports that prevalence of depression in the HIV population remains high and should be continually addressed [40]. Among the individuals with HIV disease, major depression observed is a psychiatric disorder. However, the relationships between HIV and depression are very complex and difficult to assess [37].

In Uganda HIV is a strong psychological stress that contributes to psychological **distress** and onset of mental health disorders [62]. In Kenya, studies conducted among PLWHIV have reported prevalence of major depressive disorder as 32% [38] and other depressive disorders as 15% [37].

Within sub-Saharan Africa, recent epidemiological data suggest that the prevalence of depression is high or higher than Western populations. (Tomlinson *et al*,)

Two studies in Uganda have found the prevalence of depression in the rural population is between 17% and 24%. [62]

Studies of depression prevalence within Tanzania have demonstrated variable prevalence, ranging from as low as 3.1% in a general urban population to as high as 23–28% in PLWH, 46.3% among men who have sex with men, and 57% among women living with HIV. (Seth *et al*.

2.2 Social relationship and ARV treatment.

It has been reported that people living with HIV/AIDS find it challenging to attend a daily tasks of living, participate in physical activities, or have sufficient energy while managing HIV/AIDS. Studies have found that fatigue or low energy has been associated with and poor QOL in persons with HIV/AIDS [38].

Furthermore, poor social functioning may be associated with greater use of avoidance strategies such as withdrawal and conflictual social interactions that have been shown to increase stress, resulting in poorer overall social functioning. People living with HIV/AIDS who increase their use of avoidance strategies such as behavioral disengagement and self-distraction may have poorer physical and social functioning. It seems that the use of ART may lead to unable to practice sexual activity for men hence was the source of un adhere drug effectively and cause poor quality of life [39].

Studies demonstrate that between 13% and 74% of HIV positive men in the highly active antiretroviral therapy suffering from sexual dysfunction [39]. In Iran, although, persons with HIV infection usually suffer from sexual dysfunction, but its frequency and manifestations in this population was not well known [40].

 Both organic and psychological factors have been identified as the causal factors for sexual dysfunction [41]. Indeed, poor emotional and psychological functions among people living with HIV, may lead to sexual dysfunction [42].

2.3 Physical health and ARV treatment.

Sleep disorder are more common in people living with HIV (PLWH) than in the general population, with prevalence ranging from 30% to 100%[43].

In USA, sleep disturbances have shown to have significant impact in quality of life and are associated with poorer health outcomes, including increase risk of cardiovascular and metabolic diseases as well as impaired cognition [44]. In HIV patients, impaired sleep quality has been also associated with poor medication adherence, and some have hypothesized that given the regulatory role of sleep in the immune function, sleep disorders could also independently accelerate HIV disease progression [45, 46]. The high rate and direct or indirect healthcare effects of poor quality of sleep accounts for a more serious medical disorder. Poor sleep quality overwhelms the overall health of individuals [47].

In China, it is shown that sleep disturbances occur throughout all stages of infection, and may be associated with the virus itself, antiretroviral drugs, or antidepressants. It may also increase the risk for psychiatric disorders, cardiovascular morbidity, and mortality [48, 49].

Studies done in Africa showed that people living with HIV experienced poor sleep quality. Several factors are involved to contribute these include social phobia, sexual dysfunction, poor ARV treatment adherence, and use of alcohol showed a significant association with poor quality of sleep. In Ethiopia 57.1% in a hospital, based study of persons living with HIV (PLWH) had poor sleep quality. [50].

Similarly, other studies in Nigeria and South Africa had shown that poor sleep quality is higher among PLWHIV [51]. However, studies in Brazil, [52], Iran, [47] and China are in contrast show higher prevalence of sleep disturbance in people living with HIV [49].

In Tanzania, the prevalence of sleep disturbance in HIV ranged between 8.3 percent and 12.7 percent. However, sleep disturbance has found to results in poor quality of life in PLWHIV, but its influence on ART treatment has not well studied in our settings.

2.4. Economic activity and ART treatment.

Socio economic factors affect quality of life attributes as well as the opportunities and privileges among people within the society. These factors include income, education, employment and social support can significantly affect the health of people living with HIV [53].

HIV status often has a negative impact on socioeconomic status by constraining an individual's ability to work and earn income. A lack of socioeconomic resources that linked to the practice of riskier health behaviors, which can lead to the contraction of HIV. These behaviors include substance use, which reduces the likelihood of using condoms [53].

Social economic status indicators may affect HIV risk differently for men and women. Income inequality has been found to be related to increased HIV risk for males, whereas poverty, health and housing circumstances increased risk for females [53].

Structural factors including poverty, lack of employment opportunities, limited health care access and limited transportation infrastructure have been highlighted as both independent and interactive contributors to health care engagement in HIV-positive women [53].

Barriers and facilitators to adhering to ART differ in resource-poor and resource-rich countries. In resource-poor countries, poverty may prevent access to health care and subsequent treatment, while in resource-rich countries, factors related to poverty such as addiction or depression may prevent people living with HIV from adhering to medications [53].

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study Area;

The study was conducted in Mwananyamala hospital in Dar es salaam. Mwananyamala hospital is among the three regional referral hospitals in Dar es Salaam, which receive between 800-1500 patients a day (data from registry of the hospital). Mwananyamala hospital receives patients from dispensaries and health centers, which are primary health care facilities within the district. The referral hospital operate several clinics for five days a week including medical outpatient the HIV clinic, obstetrics and gynecology clinic, diabetes clinic and pediatric clinic.

Dar es Salaam was selected conveniently, however Mwananyamala hospital was selected randomly from three regional referral hospitals in a different piece of paper and mix them together were Mwananyamala was picked by equal chance. On the Regional referral hospitals, run a HIV treatment clinic that receives are many patients attending the clinic daily. Approximated 800-1500 patients per day. Many patients are more likely to attend Regional hospital rather than the lower level health facilities.

3.2 Study design

A cross-sectional retrospective pre and post descriptive design was to answer the research questions. Quantitative data approach was employed collect the required data. Quality of life of people living with HIV was assessed before initiation and after initiation of ARV treatment.

3.3 Study population

The study populations were Patients living with HIV and attending clinics in Dar es Salaam and who were on ARV treatment.

3.4 Study target

Patients who are on ARV treatment for at least one month.

3.4.1   Inclusion Criteria

- Patients attending ARV clinic aged between 18 years and above
- Patients who are on antiretroviral therapy for at least one month before.

3.4.2 Exclusion Criteria

- Too sick to respond to the interview.
- Patients with chronic morbidity like diabetes mellitus, kaposis sarcoma, and herpes zoster.

3.5 Sample Estimation

The following formulae was used to calculate the sample

$$N = \frac{Z^2 p\, q}{E^2}$$

Where N is a sample size

Z is a % point corresponding to a significant level of 5% - 1.96

P is a proportion of quality of life for people living with HIV- 20%

Q is a 100 – p

E is a margin of error 5%

N = 1.96² p (100- p)/5x5

N =245

3.5.1 Sampling process

The sample was selected from the CTC clinics daily patients list, and participants were interviewed to collect information for a recall period of six weeks. Patients were recruited as they come to the clinic. About 45 patients were recruited in six weeks with 270 patients.

3.6 Dependent variable;

Health Related Quality of life

3.6.1 Independent variables;

Patients Variables include socio demographic such as age, gender, ethnicity, education, economic status psychosocial factors, social factors and treatment.

3.7 Data collection Instrument

Quantitative data assessed by using the World Health Organization Quality of life HIV BREF (WHOQOL- HIV BREF) standard tool questionnaire.

Quality of Life: Measurements include;

WHOQOL – These WHOQOL BREF - has 4 domains are;

Physical health, psychological health, Social relationships, environment

WHOQOL 100 questionnaire

This has six domains that include Physical, psychological, Independence, social relationships, environment & Spirituality.

HIV BREF questionnaire of 31 items in six domains such as physical, psychological, level of independence, social relationships, environment, and religious (personal beliefs) and general health perception

3.8 Data collection procedure

The quantitative data was collected based on quality of life of people living with HIV who were on ARV treatment. Study participants were selected from the list of patients attending a specific day clinic on the days of data collection. Those participants who met the inclusion criteria were interviewed after informed concert was provided. Principal investigator and two Research Assistants were ad mistered the questioner to participants. Data on socio-demographic, physical, psychological and social domains by using WHOQOL- HIV BREF instrument.

HIV BREF questionnaire used is consisted of 31 items in six such as physical, psychological, level of independence, social relationships, environment, and religious (personal beliefs). The domains used in this study are physical health domain, psychological domain and social relationship domain. For the physical health domain in this study, data was assessing sleep pattern and rest. For the psychological domain, data was collected on depression and negative feelings. For the social relationships domain data were collected on sexual activity. Data on economic activity was collected on study participants.

Each item contained a 5-point scale that represented their opinion, based on their life over the previous 4weeks. On the scale, one (1) indicated low and negative perceptions, while five (5) indicated high and positive perceptions, which denoted better quality of life.

3.9. Data Management

Every data obtained was crosschecked by principal investigator before proceeding, to ensure completeness of data and stored in a computer software.

3.10. Data analysis

Each item contained a 5-point Likert-type scale that represented participants opinion, based on their life experiences over the previous six weeks. On the scale, one (1) indicated low and negative perceptions and while five (5) indicated high and positive perceptions, which denoted better QoL. Negatively items were reverse scored, and all scores were checked for appropriate range between (1) and (5).

The item scores in each domain were scaled in a positive direction with the highest scores indicating better quality of life. Each item in the domain was scaled from level 1-5, where by level 1 is low QOL and level 5 in higher QOL. The main score of items within each domain was used to calculate domain score. The mean score was multiplied by three (3) in order to make domain scores comparable to (WHOQOL-HIV).

Data collected was analyzed by using statistical package of social science (SPSS) version 20. Descriptive statistic measures of mean and standard deviation was used to performed data analysis. Frequencies produced for categorical variables and differences between proportions were examined. Assessed using adjusted odds ratios of 95% confidence interval. P-value less than 0.5 in the bivariate analysis was included in the multivariate analysis. Variable with p-value less Frequencies for each variable of interest were run to facilitate data cleaning and checking for errors before the actual analyses was done. Data was sorted, coded, and entered into the computer using SPSS software version **20**. Data was presented using frequency tables. Descriptive statistics such as mean, frequencies and percentages were summarize the data. Both means score, before initiation of ARVs and after initiation of ARVs were calculated. Analysis of T-test statistic was used to test for difference between variables and level of significance.

3.11. Ethical clearance issue

An ethical approval obtained from the Muhimbili University of Health and Allied Sciences (MUHAS) Institutional Review Board (IRB), permission to carry out the study was sought at regional referral hospital in Dar es Salaam, and consent obtained from the study participants.

CHAPTER FOUR

4.0 RESULTS

4.1 Socio- demographic characteristics.

Two hundred and forty-five (245) patients living with HIV who were on ARV treatment were interviewed in Mwananyamala Regional Referral Hospital. Majority of the study respondents were female (64.9%) while males were about 86 (35.1 %). Majority of the participants 163 (66.5%) had primary school education. Those who had secondary education were 60(24.5%). Those aged 36-45(40.8%) years were the majority. In marital status, most of the study participants were not married 142 (58.1%). Whereas 103 (41.9%) were married and majority were females (60.1%). A large proportion 192 (78.4%) of the study participants were in good health condition and 14 (5.7%) were in poor health condition.

Table 1: Socio- demographic economic Characteristic of the Respondents

Variables	Frequency	Percentage
Sex		
Male	86	35.1
Female	159	64.9
Age group		
<25	16	6.5
26-35	46	18.8
36-45	100	40.8
46-55	59	24.1
56-65	18	7.3
>66	6	2.4
Education level		
No education	15	6.1
Primary education	163	66.5
Secondary education	60	24.5
Tertiary education	7	2.9
Marital status		
Single	103	42
Married	103	42
Separated/Divorced	27	11
Widowed/Widow	12	4.9
Employed		
Yes,	86	35.1
No	159	64.9
Health status		
Poor	14	5.7
Neither poor nor good	21	8.6
Good	192	78.4
Very good	18	7.3

Table 2: Other Socio- demographic Characteristic by sex of the Respondents

Categories	Male %	Female%	Total%
Age group			
< 25	5.8% (5)	6.9%(11)	6.55(16)
26-35	19.8% (17)	18.2%(29)	18.8%(46)
36-45	34.9% (30)	44.0%(70)	40.8 (100)
46-55	26.7% (23)	22.6 (36)	24.1(59)
56-65	11.6% (10)	5.0 % (8)	7.3%(18)
66 +	1.2% (1)	3.1% (5)	2.4%(6)
Sex	35.1%(86)	64.9%(159)	100%(245)
Education level			
No education	7.0%(6)	5.7%(9)	6.1%(15)
Primary education	57.0%(49)	71.7%(114)	24.5%(163)
Secondary education	30.2%(26)	21.4%(34)	24.5%(60)
Tertiary education	5.8%(5)	1.3%(2)	2.9%(7)
Marital status			
Single	38.4%(33)	44.0%(70)	42.0%(103)
Married	47.7%(41)	39.0%(62)	42.0%(103)
Separated/ Divorced	8.1%(7)	5.8 %(9)	4.5%(11)
Widowed	5.8%(5)	4.4%(7)	4.9%(12)
Self-rated Health status			
Very poor	0.0 (0)	0.0 (0)	0.0 (0)
Poor	4.7 %(4)	6.3%(10)	5.7%(14)
Neither poor nor good	8.1% (7)	5.7%(14)	8.6%(21)
Good	81.4%70	76.7%122	78.4%(192)
Very Good	5.8% (5)	8.2%(13)	7.3%(18)
Employment			
Employed	95.3%(82)	2.5%(4)	35.1%(86)
Un employed	4.7%(4)	97.5%(155)	64.9%(159)

Table 1 and 2 shows socio-demographic characteristics by age and sex of the respondents with different variables.

4.2 Social domain before and after ARV treatment

The respondents were asked questions about sexual intercourse to measure their quality of life of their sexual performance. Sexual performance was scaled as 1=Very poor, 2= Poor, 3=Moderate, 4=Good and 5=Very good. Most of the respondents reported to enjoy sex life, grieved with sex activity and difficulties in sex life.

Tables 3and 4 show that on average, both male and female on their sexual performance slightly decreased after they started ARV than before they started treatment. The mean score for the rate performance of sexual intercourse was 3.7 before ARV and after taking ARV were 3.6. The mean score for enjoyment of sex life was 4.2 before ARV and after ARV taken was decline to 3.6. This means that before treatment people enjoyed their sexual life but after using ART, they did not enjoy. Mean score for grieved with sex activities was 1.6   before taking ARV and after treatment was increased to 2.0. Mean score for difficulties with sex life before ARV taken was 1.5 after treatment was 1.7. This implies that treatment had not improved their sexual activities. The mean score difference observed among categories were statistically significant, (p=0.039).

Table 3; Social domain changed before and after ARV treatment

Statement	Before starting ARV					After starting ARV				
	n=	Mean	Std	Min	Max	n=	Mean	Std	Min	Max
Grieved with your sex activity	245	1.59	.881	1	4	245	2.02	1.002	1	5
Rate of sexual performance	245	3.72	.857	1	5	245	3.56	.790	1	5
Enjoyment of sex life	245	4.02	.293	3	5	245	3.62	.700	1	5
Bothered with difficulties sex life	245	1.53	.842	1	4	245	1.69	1.150	1	5

Table 4: Mean Score and Statistical Test sexual functioning sample:

Statements	n=	Mean Score Before	Mean Score After	P-value Sig.
Grieved with your sex activity	245	1.59	2.02	.000
Rate of sex performance	245	3.72	3.56	.039
Enjoyment of sex life	245	4.02	3.62	.000
Bothered with difficulties in sex life	245	1.53	1.69	.027

Table 5: Age categories on Social domain changed before and after ARV treatment.

STAEMENTS	Before starting ARV treatment							After starting ARV treatment							
	<25	26-35	36-45	46-55	56-65	66+	TOTAL	<25	26-35	36-45	46-55	56-65	66+	TOTAL	
Rate of sexual performance	0.4%	1.2%	1.2%	1.6%	0.4%	0.0%	4.9%	4.1%	15.5%	28.2%	14.7%	3.7%	1.6%	67.8%	Very poor
	0.0%	2.0%	2.4%	1.6%	0.4%	0.4%	6.9%	0.0%	0.8%	1.6%	1.6%	0.0%	0.4%	4.5%	Poor
	0.4%	0.4%	1.6%	1.2%	0.4%	0.0%	4.1%	1.2%	2.0%	9.8%	6.1%	3.3%	0.0%	22.4%	moderate
	4.5%	13.9%	33.1%	19.6%	6.1%	2.0%	79.2%	4.1%	15.5%	28.2%	14.7%	3.7%	1.6%	67.8%	Good
	1.2%	1.2%	2.4%	0.0%	0.0%	0.0%	4.9%	0.4%	0.0%	0.0%	0.0%	0.4%	0.0%	0.8%	Very good
Grieved with sex activity	4.9%	13.9%	26.9%	13.5%	3.7%	0.8%	63.7%	2.9%	8.6%	13.1%	10.2%	2.4%	0.8%	38.0%	Not at all
	0.8%	4.1%	5.7%	4.1%	2.9%	0.4%	18.0%	2.0%	6.5%	13.9%	6.1%	2.9%	0.4%	31.8%	A little
	0.8%	0.4%	6.5%	4.9%	0.4%	1.2%	14.3%	0.8%	2.0%	10.2%	5.3%	2.0%	1.2%	21.6%	Moderate amount
	0.0%	0.4%	1.6%	1.6%	0.4%	0.0%	4.1%	0.8%	1.6%	2.4%	2.4%	0.0%	0.0%	7.3%	Very much
	6.5%	18.8%	40.8%	24.1%	7.3%	2.4%	100.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	1.2%	An extreme amount
Bothered with difficulties in sex life	4.9%	14.7%	26.9%	14.7%	4.1%	1.2%	66.5%	4.9%	15.9%	29.0%	15.5%	4.1%	1.6%	71.0%	Not at all
	0.8%	3.3%	5.3%	3.7%	2.9%	0.4%	16.3%								A little
	0.8%	0.8%	6.9%	4.5%	0.4%	0.8%	14.3%	1.2%	2.9%	9.8%	6.1%	3.3%	0.0%	23.3%	Moderate amount
	0.0%	0.0%	1.6%	1.2%	0.0%	0.0%	2.9%	0.0%	0.0%	0.4%	0.4%	0.0%	0.0%	0.8%	Very much

Table 6: Sex categories on Social domain changed before and after ARV treatment (social)

Statement	Before starting ARV treatment			After taking ARV treatment			
	SEX			SEX		Total	
	Male	Female	Total	Male	Female		
Rate of sexual performance	3.7%	1.2%	4.9%	2.4%	2.0%	4.5%	Very poor
	3.3%	3.7%	6.9%	1.6%	2.9%	4.5%	Poor
	1.6%	2.4%	4.1%	5.7%	16.7%	22.4%	Moderate
	25.7%	53.5%	79.2%	24.9%	42.9%	67.8%	Good
	0.8%	4.1%	4.9%	0.4%	0.4%	0.8%	Very good
Grieved with sex activity	22.0%	41.6%	63.7%	15.9%	22.0%	38.0%	Not at all
	5.7%	12.2%	18.0%	8.6%	23.3%	31.8%	Little
				8.2%	13.5%	21.6%	Moderate
	4.9%	9.4%	14.3%				
	2.4%	1.6%	4.1%	1.6%	5.7%	7.3%	Very much
bothered with difficulties in sex life	23.7%	42.9%	66.5%	26.9%	44.1%	71.0%	Not at all
							Little
	4.9%	11.4%	16.3%				
	4.9%	9.4%	14.3%	5.7%	17.6%	23.3%	Moderate
	1.6%	1.2%	2.9%	0.0%	0.8%	0.8%	Very much

Tables 5 and 6, shows that the sexual performance, grieved with sex activity and bothered by any difficulties in sex life the most affected age group was between 36-45 years. Also females were mostly affected than male

4.3; Psychological domain before and after ARV treatment

Depression is one of the psychological domain of the quality of life. Respondent were a series of questions. A list of question was asked based on the following scale 1=Never, 2 =Seldom, 3 = Quit often, 4=Very often and 5=Always.

Tables 7 and 8 indicate that, before ARV treatment respondents had a higher mean score compared to after the use of ARV. The mean score for the sadness was 1.7 before ARV while after ARV dropped to 1.5 and those who had negative feeling had a mean score of 1.7 before taking ARV while after treatment declined to 1.5. The mean score for memory before using ARV was 1.8 and after taking ARV was high (3.3). This also shows that there was an improvement on memory issues. The results shows that there was a statistically significant difference on psychological functioning before taking ARV and after treatment.

Table 7: **Mean Score and Standard Deviation for psychological functioning.**

Statement	Before starting ARV					After starting ARV				
	n=	Mean	Std	Min	Max	n=	Mean	Std	Min	Max
Experience negative feelings	245	1.67	.713	1	4	245	1.48	.598	1	4
Bothered with sadness	245	1.68	.710	1	4	245	1.48	.598	1	4
Rate of memory capacity	245	1.78	.706	1	4	245	3.30	.936	1	4

Table 8; Mean Score and Statistical Test of psychological functioning for the sample.

Statements	n=	Mean Score Before	Mean Score After	P-value Sig.
Experience negative feelings	245	1.67	1.48	.000
Bothered with sadness	245	1.68	1.48	.000
Rate memory capacity	245	1.78	3.30	.000 .

Table 9 Age categories on psychological domain before and after ARV treatment**.**

| | Before starting ARV treatment | | | | | | | After starting ARV treatment | | | | | | | |
STAMENTS	<25	26-35	36-45	46-55	56-65	66+	TOTAL	<25	26-35	36-45	46-55	56-65	66+	TOTAL	
Negative feelings	5.7%	6.9%	19.2%	9.4%	2.9%	0.4%	44.5%	5.7%	9.4%	23.7%	13.1%	4.5%	0.4%	56.7%	Never
	0.8%	9.8%	17.1%	12.7%	3.7%	2.0%	46.1%	0.8%	8.6%	15.5%	10.2%	2.4%	2.0%	39.6%	Seldom
	0.0%	2.0%	3.7%	0.8%	0.4%	0.0%	6.9%	0.0%	0.8%	1.6%	0.0%	0.4%	0.0%	2.9%	Quit often
	0.0%	0.0%	0.8%	1.2%	0.4%	0.0%	2.4%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.8%	Very often
Bothered with sadness	5.7%	6.9%	18.4%	9.4%	2.9%	0.4%	43.7%	5.7%	9.4%	24.1%	13.1%	4.1%	0.4%	56.7%	Never
	0.8%	9.8%	18.0%	12.7%	3.7%	2.0%	46.9%	0.8%	8.6%	15.1%	10.2%	2.9%	2.0%	39.6%	Seldom
	0.0%	2.0%	3.7%	0.8%	0.4%	0.0%	6.9%	0.0%	0.8%	1.6%	0.0%	0.4%	0.0%	2.9%	Quit often
	0.0%	0.0%	0.8%	1.2%	0.4%	0.0%	2.4%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.8%	Very often
Rate of memory capacity	4.9%	6.1%	15.5%	6.5%	2.4%	0.4%	35.9%	0.8%	0.0%	3.3%	1.6%	0.8%	0.0%	6.5%	Very poor
	1.6%	10.6%	18.8%	15.1%	3.7%	2.0%	51.8%	0.4%	4.5%	4.1%	4.1%	0.4%	0.0%	13.5%	Poor
	0.0%	2.0%	5.7%	1.6%	0.8%	0.0%	10.2%	1.6%	3.7%	9.4%	6.5%	1.6%	0.4%	23.3%	Neither poor nor good
	0.0%	0.0%	0.8%	0.8%	0.4%	0.0%	2.0%	3.7%	10.6%	24.1%	11.8%	4.5%	2.0%	56.7%	Good
Health status	0.0%	0.0%	2.0%	1.6%	0.8%	0.4%	4.9%	0.8%	0.4%	2.0%	1.6%	0.8%	0.0%	5.7%	Poor
	6.5%	18.8%	38.4%	22.4%	6.5%	2.0%	94.7%	0.4%	1.2%	4.5%	1.6%	0.4%	0.4%	8.6%	Neither poor nor good
	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.4%	4.9%	15.9%	30.2%	20.0%	5.3%	2.0%	78.4%	good

Table 10; Sex categories on psychological domain before and after ARV treatment

Statement	Before starting ARV treatment			After taking ARV treatment			
	SEX		Total	SEX		Total	
	Male	Female		Male	Female		
Negative feelings	40.7%	46.5%	44.5%	20.0%	36.7%	56.7%	Never
	51.2%	43.4%	46.1%	13.9%	25.7%	39.6%	Seldom
	5.8%	7.5%	6.9%	1.2%	1.6%	2.9%	Quit often
	2.3%	2.5%	2.4%	0.0%	0.8%	0.8%	Very often
bothered with sadness	14.3%	29.4%	43.7%	20.0%	36.7%	56.7%	Never
	18.0%	29.0%	46.9%	13.9%	25.7%	39.6%	Seldom
	2.0%	4.9%	6.9%	1.2%	1.6%	2.9%	Quit often
	0.8%	1.6%	2.4%	0.0%	0.8%	0.8%	Very often
rate of memory capacity	10.6%	25.3%	35.9%	2.9%	3.7%	6.5%	Very poor
	20.8%	31.0%	51.8%	4.1%	9.4%	13.5%	Poor
	2.9%	7.3%	10.2%	11.4%	11.8%	23.3%	Neither good nor poor
	0.8%	1.2%	2.0%	16.7%	40.0%	56.7%	Good
Health status	2.4%	2.4%	4.9%	1.6%	4.1%	5.7%	Poor
	32.7%	62.0%	94.7%	2.9%	5.7%	8.6%	Neither good nor poor
	0.0%	0.4%	0.4%	28.6%	49.8%	78.4%	Good

Tables 9 and 10 show that females and young adult of age group of 36 -55 years had significant effects on negative feelings, bothered with sadness, low rate of memory capacity and health status before ARTs treatment however improved after initiation of ARTs.

4.4 Physical health before and after treatment.

The assessment of sleeping domain based on physical function, which is assessment of quality of life. In this domain, respondents were asked to report on changes experienced on physical functioning before and after starting the ARV treatment. A list of questions for difficulty sleeping, resting time, Physical pain and tiredness were scaled as 1=Not at all, 2=Little, 3=Moderate, 4= Mostly and 5=completely questions for sleeping satisfaction are scaled by 1=very dissatisfied, 2=Dissatisfied, 3= neither satisfied nor dissatisfied, 4=Satisfied and 5=very satisfied for sleeping satisfaction, enough energy was scaled by 1 =Very poor to 5 Very good.

Tables 11 and 12, show that Mean score for difficulty sleeping before using ARV was 1.1 and after taking ARV increased to1.4, the results show that there was a problem on sleeping function even after taking ARV.

Sleeping satisfaction before taking ARV was 3.4 and after treatment the mean score slightly decreased to 3.2 and Mean score for resting time before using of ARV was low to 2.9 compared to after taking ARV treatment increased to 3.99. The mean score of physical pain was 2.1 before ARV and declined to 1.2 after taking ARV. Those who experience tiredness had a mean score of 2.1 before ARV and 1.4 after taking ARV. Those who had experienced enough energy had a mean score of 2.96 and 2.84 after taking ARV. Moreover, the mean score for health satisfaction was 2.96 before taking ARV and after treatment; mean score increased to 3.99, means that there was an improvement on health satisfaction after treatment. These differences statistically significantly (P <0.000).

Table 11: **Mean Score and Standard Deviation for Physical health function:**

Statement	Before starting ARV					After starting ARV				
	n=	Mean	Std	Min	Max	n=	Mean	Std	Min	Max
Health satisfaction	245	2.96	.226	2	4	245	3.99	.307	2	5
Experience difficulty sleeping	245	1.05	.216	1	2	245	1.36	.703	1	4
Health satisfaction after treatment	245	3.39	1.02	1	5	245	3.18	.820	1	4
Enjoyment of resting time	245	2.96	.226	2	4	245	3.99	.307	2	5
Physical pain	245	2.05	.251	1	4	245	1.18	.523	1	4
Enough energy for everyday life	245	2.96	.226	2	4	245	2.84	.450	1	4

Table 12: Mean Score and Statistical Test of physical health function for the sample

Statements	n=	Mean Score	Mean Score	P-value
		Before	After	Sig.
Do you have any difficulties with your sleeping	245	1.05	1.36	.000
Sleeping satisfaction	245	3.39	3.18	.018
Enjoyment of resting time	245	2.96	3.99	.000
Physical pain	245	2.05	1.18	.000
Bothered with tiredness	245	2.05	1.36	.000
Enough energy for everyday life	245	.2.96	2.84	.000

Tables 13and 14 Show results on energy level, physical pain, tiredness, and low working capacity mostly affecting the age group of 36-45 who were mostly females before ARTs, which improved after ART**S** initiation**.** Resting time and sleeping satisfaction found to affect similar age group before treatment but did not improve after initiation of ARTs. Resting time, health status and working capacity did not show sex predilection before and after ARTs treatment.

Table 13; Age categories on physical health function.

	Before starting ARV treatment							After starting ARV treatment							
STAMENTS	<25	26-35	36-45	46-55	56-65	66+	TOTAL	<25	26-35	36-45	46-55	56-65	66+	TOTAL	
Enough energy	0.0%	0.0%	2.0%	1.6%	0.8%	0.4%	4.9%	0.4%	2.4%	6.5%	3.7%	0.8%	0.8%	14.7%	Little
	6.5%	18.8%	38.4%	22.4%	6.5%	2.0%	94.7%	5.7%	15.5%	33.1%	19.6%	6.5%	1.6%	82.0%	Moderate
	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.4%	0.0%	0.4%	0.8%	0.4%	0.0%	0.0%	1.6%	Very much
Sleeping satisfaction	0.8%	0.4%	4.9%	3.7%	0.0%	0.0%	9.8%	0.4%	1.6%	0.8%	0.0%	0.0%	0.0%	2.9%	Very dissatisfied
	0.4%	2.4%	3.7%	2.9%	1.2%	0.0%	10.6%	0.8%	4.1%	7.3%	4.1%	1.2%	0.0%	17.6%	Dissatisfied
	1.2%	2.0%	4.1%	2.4%	0.8%	0.8%	11.4%	3.3%	3.7%	17.6%	10.2%	2.0%	1.6%	38.4%	Neither satisfied nor dissatisfied
	3.7%	13.9%	28.2%	15.1%	4.9%	1.6%	67.3%	2.0%	9.4%	15.1%	9.8%	4.1%	0.8%	41.2%	Satisfied
Physical pain	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.4%	5.3%	16.7%	38.0%	18.4%	6.1%	1.6%	86.1%	Not at all
	6.5%	18.8%	38.4%	22.4%	6.5%	2.0%	94.7%	0.8%	1.6%	2.4%	5.3%	0.8%	0.0%	11.0%	Little
	0.0%	0.0%	2.0%	1.6%	0.8%	0.0%	4.5%	0.4%	0.0%	0.4%	0.0%	0.0%	0.4%	1.2%	Moderate
	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.4%	0.0%	0.4%	0.0%	0.4%	0.4%	0.4%	1.6%	Very much
Bothered with tiredness	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.4%	4.9%	15.9%	31.4%	14.3%	5.7%	0.4%	72.7%	Not at all
	6.5%	18.8%	38.4%	22.4%	6.5%	2.0%	94.7%	0.8%	2.4%	5.7%	8.2%	0.8%	0.8%	18.8%	Little
	0.0%	0.0%	2.0%	1.6%	0.8%	0.0%	4.5%	0.8%	0.4%	3.7%	1.6%	0.8%	0.8%	8.2%	Moderate
	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.4%	Very much
Working capacity	2.0%	3.3%	4.5%	1.6%	1.2%	0.4%	13.1%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.8%	Poor
	0.4%	1.6%	3.3%	1.6%	0.0%	0.8%	7.8%	0.8%	0.8%	4.5%	3.7%	0.8%	0.4%	11.0%	Moderate
	4.1%	13.9%	33.1%	20.4%	6.1%	1.2%	78.8%	5.3%	16.3%	34.7%	20.0%	6.5%	2.0%	84.9%	Good
	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.4%	0.4%	0.8%	1.6%	0.4%	0.0%	0.0%	3.3%	Very good
Resting time	0.0%	0.0%	2.0%	1.6%	0.8%	0.4%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.4%	Little
	6.5%	18.8%	38.4%	22.4%	6.5%	2.0%	94.7%	0.4%	0.4%	1.2%	1.6%	0.4%	0.0%	4.1%	Moderate
	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.4%	6.1%	18.0%	37.1%	21.6%	6.9%	2.0%	91.8%	Mostly

Table 14; Sex categories on physical health function.

Before starting ARV treatment				After starting ARV treatment			
Statement	SEX		Total	SEX		Total	
	Male	Female		Male	Female		
Enough energy	2.4%	2.4%	4.9%	3.3%	11.4%	14.7%	Little
	32.7%	62.0%	94.7%	29.8%	52.2%	82.0%	Moderate
	0.0%	0.4%	0.4%	0.8%	0.8%	1.6%	Very much
Sleeping satisfaction	4.1%	5.7%	9.8%	1.6%	1.2%	2.9%	Very dissatisfied
	3.3%	7.3%	10.6%	6.1%	11.4%	17.6%	Dissatisfied
	2.0%	9.4%	11.4%	13.5%	24.9%	38.4%	Neither satisfied nor dissatisfied
	25.3%	42.0%	67.3%	13.9%	27.3%	41.2%	Satisfied
	0.4%	0.4%	0.8%				Very satisfied
Physical pain	0.0%	0.4%	0.4%	29.8%	56.3%	86.1%	Not at all
	32.7%	62.0%	94.7%	3.7%	7.3%	11.0%	Little
	2.0%	2.4%	4.5%	0.8%	0.4%	1.2%	Moderate
	0.4%	0.0%	0.4%	0.8%	0.8%	1.6%	Very much
Bothered with tiredness	0.0%	0.4%	0.4%	25.3%	47.3%	72.7%	Not at all
	32.7%	62.0%	94.7%	6.9%	11.8%	18.8%	Little
	2.0%	2.4%	4.5%	2.9%	5.3%	8.2%	Moderate
	0.4%	0.0%	0.4%	0.0%	0.4%	0.4%	Very much
Working capacity	4.9%	8.2%	13.1%	0.4%	0.4%	0.8%	Poor
	2.4%	5.3%	7.8%	3.7%	7.3%	11.0%	Moderate
	27.8%	51.0%	78.8%	29.8%	55.1%	84.9%	Good
	0.0%	0.4%	0.4%	1.2%	2.0%	3.3%	Very good
Resting time	2.4%	2.4%	4.9%	0.4%	0.0%	0.4%	Little
	32.7%	62.0%	94.7%	1.6%	2.4%	4.1%	Moderate
	0.0%	0.4%	0.4%	32.7%	59.2%	91.8%	Mostly

4.5 Economic activity before and after ART treatment.

The respondents were asked to report on changes experienced before and after starting the ARV treatment. A question on capacity of doing work, was scaled by 1=Very poor, 2=Poor, 3=Moderate, 4=Good and 5=Very good.

Tables 15and 16 show that mean score of capacity of doing work before ARV was 3.7 and after treatment increased to3.9 that means there is an improvement on capacity of working. Mean score of financial difficulties before ARV taken was 1.3 and after treatment was 2.86 and mean score for transport before taken ARV was high at 2.4 and after treatment was decreased to 1.97, hence the (P< 0.027)

Table 15   **Mean Score and Standard Deviation for economic activity:**

Statement		**Before starting ARV**					**After starting ARV**			
	n=	Mean	Std	Min	Max	n=	Mean	Std	Min	Max
Capacity of doing work	245	3.67	.703	1	4	245	3.91	.409	2	5
Financial difficulties	245	1.28	509	1	4	245	2.86	.961	1	5
Problem with transport	245	2.42	1.032	1	5	245	1.97	.851	1	4

Table 16: Mean Score and Statistical Test of economic activity for the sample:

Statements	n=	Mean Score Before	Mean Score After	P-value Sig.
Capacity of doing work	245	3.67	3.91	.000
Financial difficulties	245	1.28	2.86	.000
Problem with transport	245	2.42	1.97	.027

CHAPTER FIVE

5.0 DISCUSSION

Quality of life is one of the outcome measures of health intervention, on person's life at any given period and is considered as the well-being in physical health, psychosocial, happiness with life and satisfaction of needs [54].

The outcome measure in the management of HIV and reflect care and satisfaction among patients living with HIV/AIDS [55]. The QOL domain such as physical domain, social domain and physiological domain were improved after using of ARTs treatment but sexual did not found to be improved.

The mean score for rate performance of sexual intercourse was 3.7 before ARV and after taking ARV were 3.56. The mean score for sex enjoyment was 4.2 before ARV and after taking ARV were 3.62. The mean score difference observed among categories were statistically significant, (p=0.039). This finding reflects that, level of satisfaction with sexual life, feeling of joy and happiness on sexual intercourse. However, this was differently observed among categories of before and after being on ARV treatment. This implies that on average both male and female their sexual performance decrease after they started ARV than before they started the treatment. This could imply that ART treatment to some extent reduces their sexual arousal as one of the adverse effects. A study done in Sweden reported that majority of the study subjects were very dissatisfied with sexual performance accounting for 33%, men had a less favorable score in each domain of sexual functioning compared to ARV naive men on erectile function , sexual desire , orgasmic function , intercourse satisfaction and overall sexual satisfaction [58]. Swedish clinical data from a health clinic of living with HIV visiting infectious disease in 2012 found that 41% were sexually dissatisfied [56].

This study find that on sexual domain, most affected age group was between 36-45 years, and females were mostly affected.

The psychosocial effects of testing positive for HIV is important considering that psychological issues impact heavily on QoL of people living with HIV. Constant worry, stress and anxiety contribute to poor QoL. In this study, mean score for the sadness was 1.7 before ARV while after ARV dropped to 1.5 after ARV and those who had negative feelings about themselves had a mean score of 1.7 before taking ARV while after ARV

became 1.48 further more results shows that there is statistically significant difference on psychological functioning changes before taking ARV and most of the respondents reported an improvement on psychological functioning. This means that ARTs have benefits for those who are psychologically problem so functioning that also affect capacity of working.

Rates of positive depression were exceedingly common among Tanzanian PLWH by 77.8%, which is the two–four-fold higher risk among PLWHIV before starting ARTs as it is found in this study. ART treatment has been found to improve the level of depression as shown by other studies.

Khayelitsha et al showed that ARVs was associated with reduced anxiety, depression [57]. The results of this study contradict previous research in terms of negative feelings in which the psychological effects do not improve on ART treatment [58]. In depression domain shows that females and young adult at age group of 36 -55 years were having significant effects on negative feelings, bothered with sadness, low rate of memory capacity and health status before ARTs treatment that found to improve after initiation of ARTs.

Regarding physical functioning on the case of sleep disturbances had significant effect on quality of life and was associated with poor health outcomes, including increase risk of cardiovascular and metabolic diseases as well as impaired cognition.

In this study, we found that mean score of difficulty in sleeping before using ARV was 1.1 and after taking ARV was 1.4, the results shows that the treatment improve sleeping after the treatment. Mean score for sleeping satisfaction before taking ARV was 3.4 and after treatment, the mean score decreased to 3.2. This implies that there is no improvement on their sleeping satisfaction.

Mean score for resting time before using of ARV was low to 2.96 and after taking ARV treatment was increased to 3.99. This means that HIV treatment in this population did not improve sleep satisfaction.

Energy level, physical pain, tiredness, and low working capacity mostly denote the age group of 36-45years was mostly affected and majority were females. The findings of this study correlate with the findings by Xiaojie Huang et al, that shows that HIV-

infected persons have a high prevalence of sleep disturbance even with ART treatment [59].

Resting time, health status and working capacity are not related with predilection before and after ARTs treatment. Poor sleeping function among HIV-infected persons might be related to poor immunity. Studies have shown that there is statistically significantly higher rate of sleep disturbance related to poor immunity. However, others have found that sleep disturbances are independently related to immune status [60].

In this study, most of the respondents had improved working capacity after being on ART. Before ARV treatment was 1.28, after treatment was 2.86, mean score for those who had a problem with transport before taken ARV was high at 2.4, and after treatment was decreased to 1.97. This means that the treatment helps to reduce the problem of transport while the p value is 0.027, which is less than 0.05. These results implies that ARVs improve the quality of life on their daily work performance.

Work performance trends among HIV-patients and have been measured in terms of Functional impairment.

This current study shows that, there is an improvement on physical health state after initiation of ARVs experience less fatigue and more energy, less physical and back pain. Therefore, the difference on physical health state between before taking ARV and after taking ARV was statistically significant as most of the respondents reported better condition after initiation of ARVs than before initiation.

This implies that people who are using ARVs have less complain on physical functioning compared to those who are not on ARV. This study finding is correlated with a study done by Mweete et al in South Africa, which shows that ART is effective in improving the HRQoL that was explored through self-rated health state, who were immunocompromised, in improving physical domain functional performance [61]. Improvements in physical health over the first year of treatment were also seen in rural Uganda and found a significantly improvement with that show that overall physical health and all domains had higher mean score between baseline and 1 year, according to [62].

In South Africa, patients not on ARV were consistently more likely to report body pain or headache, nausea, and fatigue [61].

In this study patient, living with HIV the QOL in domains of physical health, psychological and socioeconomically improved when started on ARVs except on enjoyment and sexual performance and sleep domain.

Overall, the use of ARTs improves QOL in patients living with HIV. This could be explained by the fact that ARTs use improves their health condition immunity status of the patients, helping in reducing depression and physical health, but in other words adverse effects of ARTs has effect on sexual performance and sleep function which has been observed in other studies.

5.1 Limitation of the study

This was a cross sectional study that employed retrospective data collection the quality of life due to ART that occurred over time may not be captured by study design.

The study used only three domains from WHOQOL- Bref, other item of QOL could not be assessed.

CHAPTER SIX

6.0 CONCLUSION

1. The respondents reported improved in psychological functioning, mental and emotional wellbeing, while receiving ARVs than before started ARV treatment.

2 .In regarding physical functioning respondents receiving ARVs were on average better off, after being treated by ARVs than before.

3.Regarding sexual performance most of the respondents were less functional after starting ARV treatment.

6.1 RECOMMENDATION

The study conclude that ARV improve the quality of life so doctors should advice the patients to adhere to drugs taking.

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APPENDIXES

Appendix I: Research Budget

Activity	Unit cost (TZS)	Quantity	Days	Total cost (TZS)
Stationary cost				
▪ Photo copying of questionnaires and dissertation	100,000/=	1		100,000/=
▪ Binding of the completed Dissertation	150,000/=	1		150,000/=
▪ Printing of the completed Dissertation	150,000/=	1		150,000/
▪ Transport to and from the field site	200,000/=			200,000/=
Personal allowances for two research assistants during data collection	50,000/=	2	5	500,000/=
Contingency	100,000/=			100,000/=
Grand Total				1,200,000/=

Appendix II: questionnaire form for participants (English version)

Date…………………………………………..

Serial number …………………………………...

District …............................

DEMOGRAPHIC CHARACTERISTICS

Please circle the answers.

1. What is your sex?

a) Male

b) Female

2. How old are you? (Age in years) ………………….

3. What is the highest education you received?

a) No education

b) Primary

c) Secondary

d) Tertiary

4. What is your marital status?

a) Single

b) Married

c) Separated/ Divorced

d) Widowed

5. Are you employee?

 a) Yes

 b) No

Questions related to health.

6 (i) How is your health now?

a) Very Poor

b) Poor

c) Neither Poor nor Good

d) Good

e) Very Good

7 (ii) How is your health before treatment?

 a) Very Poor

b) Poor

c) Neither Poor nor Good

d) Good

e) Very Good

8 (i) **How much did you satisfied with your health before treatment**

a) Very dissatisfied

b) Dissatisfied

c) Neither satisfied nor dissatisfied

d) Satisfied

e) Very satisfied

(ii) How do you satisfied with your health now?

a) Very dissatisfied

b) Dissatisfied

c) Neither satisfied nor dissatisfied

d) Satisfied

e) Very satisfied

Questions related to taken of drugs

9. How often did you miss to take your anti-HIV medications?

a) Never
b) Some of the time
c) About half of the time
d) Most of the time
e) All of the time

10. Did you miss any of your anti-HIV medications?

a) Yes
b) No

11. When was the last time you missed any of your medications?

 a) 1 weeks ago

 b) 2 weeks ago

 c)   1-3 months ago

 d)   More than 3 months ago

 e) Never skip medications or not applicable

Questions ask about pain

12. To what extent did you feel that physical pain prevents you from doing what you need to do?
a) Not at all
b) A little
c) A moderate amount
d) Very much,
e) An extreme amount

13 **(i)** How much are you bothered by any physical Pain?
a) Not at all
b) A little
c) A moderate amount
d) Very much
e) An extreme amount

(ii)Would experience any pain before treatment
 a) Not at all
b) A little
c) A moderate amount
d) Very much,
e) An extreme amount

14(i) How much tiredness bothered you
a) Not at all
b) A little
c) A moderate amount
d) Very much,
e) An extreme amount

(ii)Did you experience any tiredness before treatment?
a) Not at all
b) A little
c) A moderate amount
d) Very much
e) an extreme amount

15. (i) Do you have enough energy for everyday life?
a) Not at all
b) A little
c) Moderately
d) Mostly
e) An extreme amount

(ii) **How would you rate your energy before treatment?**

a) Not at all

b) A little

c) Moderately

d) Mostly

e) An extreme amount

Question about sleeping.

16.(i) Do you have any difficulties on your sleeping?

a) Not at all

b) A little

c) Moderately

d) Mostly

e) Completely

(ii) **Would you experience difficulty sleeping before treatment?**

a) Not at all

b) A little

c) Moderately

d) Mostly

e) Completely

17 (i) How much do you satisfied with your sleeping before treatment

a) Very dissatisfied

b) Dissatisfied

c) Neither satisfied nor dissatisfied

d) Satisfied

e) Very satisfied

(ii) How do you satisfied with your sleep after treatment?

a) Very dissatisfied

b) Dissatisfied

c) Neither satisfied nor dissatisfied

d) Satisfied

e) Very satisfied

18.(i) At what extent enjoy your rest time?

a) Not at all

b) A little

c) Moderately

d) Mostly

e) Completely

(ii)Did you experience good enjoyment and rest before treatment?

a) Not at all

b) A little

c) Moderately

d) Mostly

e) Completely

Question about sexual activities.

19 (i) How are you grieved with your sex activity?

a) Not at all

b) A little

c) Moderately
d) Mostly
e) Completely
(ii) **Did you experience grieved with your sex activity**
 a) Not at all
b) A little
c) Moderately
d) Mostly
 e) Completely

20. (i) Are you bothered by any difficulties in your sex life?
a) Not at all
b) A little
c) Moderately
d) Mostly
e) Completely
(ii) Did you experience bothered in your sex life

a) Not at all
b) A little
c) Moderately
d) Mostly
e) Completely
21.(i) How would you rate your sex life before treatment?
 a) Very poor
b) Poor
c) Neither poor nor good

d) Good

e) Very Good

(ii) How are you rate your sex life after treatment? 1 2 3 4 5

a) Very poor

b) Poor

c) Neither poor nor good

d) Good

e) Very Good

22. (i) would you enjoy your sex activity before starting ARV?

 a) Not at all

b) A little

c) Moderately

d) Mostly

e) Completely

(ii) Are you enjoy your sex activity now?

a) Not at all

b) A little

c) Moderately

d) Mostly

e) Completely

23.(i) Do you have financial Difficulties?

a) Not at all

b) A little

c) A moderate amount

d) Very much

e) An extreme amount

(ii) Did you experience financial difficulties before treatment?

a) Not at all

b) A little

c) A moderate amount

d) Very much

e) An extreme amount

Question about feelings.

24.(i) Have you experience negative feelings before treatment?

 a) Never

b) Seldom

c) Quite often

d) Very often

e) Always

(ii) How often do you have negative feelings such as blue mood, despair, anxiety, depression?

a) Never

b) Seldom

c) Quite often

d) Very often

e) Always

25 (i) How much are you bothered with sadness?

a) Never

b) Seldom

c) Quite often

d) Very often

e) Always

 (ii) Have you experience sadness before treatments?

a) Never

b) Seldom

c) Quite often

d) Very often

e) Always

Questions about memory

26.(i) How do you rate your memory capacity now?

a) Very poor

b) Poor

c) Neither poor nor good

d) Good

e) Very Good

(ii) How did you rate your memory capacity before treatment?

a) Very poor

b) Poor

c) Neither poor nor good

d) Good

e) Very Good

Question about work

27.(i)How would you rate your ability to work now?

a) Very poor

b) Poor

c) Moderate

d) Good

e) Very Good

(ii) How was your capacity of doing work before treatment?

a) Very poor

b) Poor

c) Moderate

d) Good

e) Very Good

Questions about transport.

28. (i)To what extent do you have a problem with transport?
a) Not at all
b) A little
c) A moderate amount
d) Very much
e) An extreme amount.
(ii)Did you experience difficulties transport?
a) Not at all
b) A little
c) A moderate amount
d) Very much
e) An extreme amount

Appendix III: Dodoso la Kiswahili

Namba ya dodoso …………………………….

Manispaa …..

Kata / Mtaa ……………………………..

TAARIFA ZA KIDEMOGRAPHIA

Tafadhali zungushia duara majibu sahihi.

1. jinsia yako

a) Mme

b) mke

2. umri wako? (Miaka)…………………..

3. kiwango cha elimu.

a) Hajasoma

b) Elimu ya msingi

c) Elimu ya secondari

d) Elimu ya juu.

4. Hali ya ndoa?

a) Hajaoa / kuolewa

b) Ameoa/ kuolewa

c) Mmetengana/ Mmeachana

d) Umefiwa na mume/ mke

5 Je umajiriwa?

a) Ndiyo

b) Hapana

Maswali yanayohusu afya.

6. Vipi hali yako ya sasa?

a) Mbaya sana

b) Mbaya

c) Siyo mbaya wala nzuri

d) Nzuri

e) Nzuri sana

Questions related to health.

7. Vipi hali yako kabla ya matibabu?

 a) Mbaya sana

b) Mbaya

c) Siyo mbaya wala nzuri

d) Nzuri

e) Nzuri sana

8. (i)Umeridhika kiasi gani na hali ya afya yako kabla ya matibabu?

 a) Sijaridhika

b) Sijaidhika kabisa

c) Katikati

d) Nimeridhika

e) Nimeridhika sana

(ii)Unaridhika kiasi gani na hali ya afya yako kwa sasa?

 a) Siridhiki

b) Siridhiki kabisa

c) Katikati

d) Naridhika

e) Naridhika sana

Maswali yanayohusiana na matumizi ya dawa za VVU

9. Ni mara ngapi umewahi kosa kula dawa zako?

a) Sijawahi

b) Mara chache

c) Wakati mwingine

d) Mara kwa mara

e) Mara nyingi

10. Wakati gani ilikua mara ya mwisho kukosa dawa yako yoyote. 1 2 3 4 5

a) Wiki 1 iliyopita

b) Wiki 2 ziliyopita

c)Mwezi 1-3 iliyopita

d) Zaidi ya miezi 3 iliyopita

e) Sijawahi kuacha kula dawa

11. Je kuna madhara yeyote unapomeza dawa zako?

a) Hata kidogo

b) Kidogo tu

c) Kwa kiasi

d) Kwa wingi

e) Wingi sana

Maswali yafuatayo yanapima maumivu

13 (i) Ni kwa kiasi gani unaona kwamba maumivu ya mwili yanakuzuia kufanya kile ambacho ungepaswa ufanye ?

a) Hata kidogo

b) Kidogo tu

c) Kwa kiasi

d) Kwa wingi

e) Wingi sana

14. Je uchovu hukusumbua kwa kiwango gani ? 1 2 3 4 5

a) Hata kidogo

b) Kidogo tu

c) kiasi

d) sana

e) sana sana

15(i) Je una nguvu za kutosha kwa maisha ya kila siku ? 1 2 3 4 5

a) sina hata kidogo

b) Ninayo kidogo

c) Ya kutosha

d) Mara nyingi.

(ii) Je una nguvu za kutosha kwa maisha ya kila siku ? 1 2 3 4 5

a) sina hata kidogo

b) Ninayo kidogo

c) Ya kutosha

d) Mara nyingi

Maswali kuhusu usingizi

16.(i) Je una shida yeyote ya kupata usingizi? 1 2 3 4 5

a) Sina hata kidogo

b) Ninayo kidogo

c) Ninayo kiasi

d) Ninayo sana

e) Ninayo kubwa sana

(ii) Je umepata shida yeyote ya kupata usingizi kabla ya matibabu? 1 2 3 4 5

a) Sina hata kidogo

b) Ninayo kidogo

c) Ninayo kiasi

d) Ninayo sana

e) Ninayo kubwa sana

17. (i) Umeridhika kiasi gani na kusinzia kwako kabla ya matibabu ? 1 2 3 4 5

a) Siridhiki hata kidogo

b) Siridhiki

c) Katikati

d) Naridhika

e) Naridhika sana

(ii). Unaridhika kiasi gani na kusinzia kwako baada ya matibabu ?

a) Siridhiki hata kidogo

b) Siridhiki

c) Katikati

d) Naridhika

e) Naridhika sana

18(i)Je unafurahia kiasi gani muda wako wa kupumzika?

a)Sifurahi hata kidogo

 b)Nafurahi kidogo

c) Nafurahi kadiri

 d)Nafurahi sana

e)Nafurahi sana sana.

18 (ii)Je umewahi kufurahia muda wako wa kupumzika kabla ya matibabu?

a)Sifurahi hata kidogo

 b)Nafurahi kidogo

c) Nafurahi kadiri

 d)Nafurahi sana

e)Nafurahi sana sana.

Maswali yanayohusu mapenzi

19.(i) Je unaudhika kiasi gani na matatizo ulionayo katika shughuli zako za kimapenzi?

a) Siudhiki hata kidogo

b) Siudhiki

c) Kiasi

d)Naudhika

(ii) Je umeudhika kiasi gani na matatizo ulionayo katika shughuli zako za kimapenzi kabla ya matibabu?

a) Siudhiki hata kidogo

b) Siudhiki

c) Kiasi

d)Naudhika

e) Naudhika sana

20(i) Unasumbuliwa na ugumu wowote katika maisha yako ya mapenzi?

a) Hata kidogo

b) Kidogo

c) Kati kwa kati

d) Kiasi kikubwa

e) Kiasi kubwa sana

(ii) Umewahi kuona ugumu wowote katika maish yako ya mapenzi kabla ya matibabu?

a) Hata kidogo

b) Kidogo

c) Kati kwa kati

d) Kiasi kikubwa

e) Kiasi kubwa sana

21. (i)Je,unakadiriaje shughuli zako za kimapenzi kabla ya matibabu?
a)Mbaya sana
b)Mbaya
c)Kati kati
d)Nzuri
e)Nzuri sana

(ii).Je,unakadiriaje shughuli zako za kimapenzi baada ya matibabu?
a)Mbaya sana
b)Mbaya
c)Kati kati
d)Nzuri
e)Nzuri sana

22(i) Umefurahia shughuli zako za kimapenzi kabla ya matibabu?

a) Hata kidogo

b) Kidogo

c) Kati kwa kati

d) Kiasi kikubwa
e) Kiasi kubwa sana
(ii) Unafurahia shughuli zako za kimapenzi kwa sasa
a) Hata kidogo
b) Kidogo
c) Kati kwa kati
d) Kiasi kikubwa
e) Kiasi kubwa sana
Swali kuhusu kipato.

23 (i). Ugonjwa ulionao unaathiri shughuli zako za kiuchumi? 1 2 3 4 5

a) Hata kidogo

b) Kidogo

c) Kati kwa kati

d) Kiasi kikubwa

e) Kiasi kubwa sana

(ii). Ugonjwa ulionao umeathiri shughuli zako za kiuchumi kabla ya matibabu? 1 2 3 4 5

 a) Hata kidogo

b) Kidogo

c) Kati kwa kati

d) Kiasi kikubwa

e) Kiasi kubwa sana

Maswali kuhusu msongo wa mawazo
24(i).Kabla ya matibabu umewahi kupata hisia mbaya (msongo wa mawazo)?
a) kamwe sipati
b) Mara chache
c) Mara nyingi
d) Mara nyingi sana
e) Daima.
(ii). Ni mara ngapi unapata hisia mbaya, kama vile wasiwasi, kukata tamaa, msongo wa mawazo?
a) kamwe sipati
b) Mara chache
c) Mara nyingi
d) Mara nyingi sana
e) Daima.
25(i) Ni kwa kiasi gani wewe husumbuliwa na fikira za huzuni ?
a) kamwe sipati
b) Mara chache
c) Mara nyingi
d) Mara nyingi sana
e) Daima.
(ii) Umewahi kusumbuliwa na fikira za huzuni kabla ya matibabu ?
a) kamwe sipati
b) Mara chache
c) Mara nyingi
d) Mara nyingi sana
e) Daima.

26.(i) unakadiriaje uwezo wa kukumbuka vitu?

a) Mbaya sana

b) Siyo mbaya

c) wala nzuri

d) Nzuri

e) Nzuri sana

(ii)umekadiriaje uwezo wa kukumbuka vitu?

a) Mbaya sana

b) Siyo mbaya

c) wala nzuri

d) Nzuri

e) Nzuri sana

27 (i) Unakadiriaje uwezo wako wa kufanya kazi kwa sasa?

a) Duni sana

b) Duni

c) Kadiri

d) Mzuri

e) Mzuri sana.

(ii). Je, uwezo wako wa kufanya kazi ulikuaje kabla ya matibabu?

a) Duni sana

b) Duni

c) Kadiri

d) Mzuri

28 (i) Kwa kiasi gani una shida ya usafiri kwa ajili ya matibabu? 1 2 3 4 5

a) Hata kidogo

b) Kidogo

c) Kadiri

d) Sana

e) Sana Sana

(ii) Ulishawahi kupata shida ya usafiri Kwa ajili ya matibabu? 1 2 3 4 5

a) Hata kidogo

b) Kidogo

c) Kadiri

d) Sana

e) Sana Sana

Appendix IV: English Version Consent Form

GREETINGS: MADAM / SIR

My name is Amana Juma. Iam a student from Muhimbili University of Health and Allied sciences (MUHAS) Pursuing Master of Project Management, Monitoring and Evaluation in Health. As part of my award, I am required to conduct a research and produce useful findings for study purpose, university and community.

The aim of the study in a partial fulfillment of the requirement of the degree of Master of Science in Project Management, Monitoring and Evaluation in Health. The purpose of the study is to find out the effect of quality of life experienced by HIV patients on ART adherence treatment among HIV patients attended clinic in DAR ES SALAAM.I am recruiting patients from regional hospital in Dar es Salaam including Mwananyamala.

The consented patients will be interviewed by using WHO QOL BREEF validated tool for measurement of QOL domain, which are physical domain, social domain and psychological domain. The results are recorded on special papers where interpretations are done by principle investigator.
All information I am going to collect will be confidential and will only be used for the purpose of better care and treatment, in the medical research information and to enable clinician to improve patients care.
Participation is voluntary and you have the right to discontinue in participating from the study at any time.

Amana Juma
Investigator.

I _____

Have understood the above information, and willingly I agree to take part in this study

Participant Name_____Signature_____

Date: _____

Investigator _____Signature _____

Date: _____

Appendix V: Fomu ya Ridhaa: Dodoso la Kiswahili

HABARI YA SAA HIZI:

Jina langu naitwa Amana Juma. Ni mwanafunzi wa chuo kikuu cha afya na Sayansi Shirikishi Muhimbili. Ninachukua shahada ya uzamili ya menejimenti ya mradi, ufuatiliaji na tathmini katika afya. Kama sehemu ya tuzo ya cheti cha shahada yangu ninahitajika kufanya utafiti na kutoa matokeo muhimu kwa ajili ya chuo na jamii.

Dhamira ya utafiti. Utafiti huu utafanywa kutekeleza mahitaji ya shahada ya uzamili ya menejimenti ya mradi, ufuatiliaji na tathmini katika afya.

Lengo la utafiti huu ni kuangalia ubora wa maisha ya wagonjwa wanaoishi na virusi vya ukimwi na mahusiano ya uzingatiaji wa dawa za virusi vya ukimwi.

Utafiti huu utafanyika kwa wagonjwa wanaofika katika hospitali ya mkoa wa Dar es Salaam, Mwananyamala.

Wagonjwa watakaokubali kushiriki katika utafiti huu, watafanyiwa mahojiano kwa kutumia kifaa sahihi ambacho ni WHO QOL BREEF kinachopima ubora wa maisha ya wagonjwa wanaoishi na virusi vya ukimwi ambapo inapima mtazamo wa matibabu, msongo wa mawazo na mahusiano katika tendo la ndoa kwa ujumla. Na majibu yake huandikwa kwenye karatasi maalum.

Taarifa zote za utafiti huu ni siri na zitatumika tu kwa ajili ya kuboresha huduma ya afya na utabibu kwa wagonjwa na wananchi kwa ujumla na kutumika katika tafiti mbalimbali za afya na utabibu. Vilevile utafiti huu utasaidai kupata taarifa zitakazosaidia kuimarisha utoaji wa huduma za afya kwa wagonjwa.

Ushiriki wako ni wa hiari na pia unayo haki ya kujitoa katika utafiti huu wakati wowote utakapojisikia kufanya hivyo.

Amana Juma
Mtafiti.

Mimi _____

Nimeelewa maelezo yaliyoandikwa hapo juu. Mimi kwa hiari yangu mwenyewe, bila kushurutishwa na mtu, ninakubali kushiriki katika utafiti huu.

- Mshiriki _____   Sahihi_____
- Tarehe _____
- Mtafiti _____   Sahihi _____
- Tarehe _____