FACTORS INFLUENCING INITIATION INTO ANTIRETROVIRAL THERAPY OF HIV-POSITIVE CLIENTS AT HIV TESTING SERVICE OUTREACHES IN WAKISO DISTRICT

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DEDICATION

This research is a dedication to the family of Mama Amuge Esther

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LIST OF ABBREVIATIONS

AIDS – Acquired Immune Deficiency Syndrome

ART – Antiretroviral Therapy

CI- Confidence Interval

COP – Country Operational Plan

DSD – Differentiated Service Delivery

HIV – Human Immune Virus

HIV 1 – Human Immune Virus type 1

HTLV – Human T-lmphotrophic Virus

HTS – HIV Testing Services

LGBT – Lesbians, Gay, Bisexual, and Transgender

NGO – Non Governmental Organization

PEPFAR – President's Emergency Plan for AIDS Relief

PLHIV – People Living with HIV

PNFP – Private Not for Profit

SSA – Sub Saharan Africa

UAC – Uganda Aids Commission

UDHS – Uganda Demographic Health Survey

UN – United Nations

UNAIDS – Joint United Nations Program on HIV and AIDS

UPHIA – Uganda Population-Based HIV Impact Assessment

VMMC – Voluntary Medical Male Circumcision

WHO – World Health Organization

DEFINITION OF KEY TERMS

Adherence is the extent to which a person's behavior – taking medication, following a diet and/or changing lifestyle – corresponds with agreed recommendations from a health worker.

ART (antiretroviral therapy) refers to the use of a combination of three or more ARV drugs for treating HIV infection. ART involves lifelong treatment. Synonyms are combination ART and highly active ART

ARV (antiretroviral) drugs refer to the medicines used to treat HIV.

Binary logistic regression is used to predict the odds of being a case based on the values of the independent variables (predictors). The odds are defined as the probability that a particular outcome is a case divided by the probability that it is a non-case.

Continuum of HIV care refers to a comprehensive package of HIV testing, prevention, treatment and care services provided for people at risk of acquiring HIV and people living with HIV and their families. Examples of these services include combination HIV prevention, including PrEP; HIV testing and linkage to care; managing opportunistic infections and other comorbid conditions; initiating, maintaining and monitoring ART; switching to second-line and third-line ART; and palliative care.

Dummy Variable trap: In statistics and econometrics, particularly in regression analysis, a dummy variable (also known as an indicator variable, design variable, one-hot encoding, Boolean indicator, binary variable, or qualitative variable) is one that takes the value 0 or 1 to indicate the absence or presence of some categorical effect.

HIV refers to Human Immunodeficiency Virus. There are two types of HIV:HIV-1 and HIV-2.

HIV-1is responsible for the vast majority of HIV infections globally.

Linkage is defined as a process of actions and activities that supports people testing for HIV and people diagnosed with HIV in engaging with prevention, treatment and care services as appropriate

for their HIV status. For people with HIV, it refers to the period beginning with HIV diagnosis and ending with enrolment in care or treatment.

Logistic regression, like all regression analyses, the logistic regression is a predictive analysis. Logistic regression is used to describe data and to explain the relationship between one dependent binary variable and one or more nominal, ordinal, interval or ratio-level independent variables.

Odds ratio; For example, in logistic regression the odds ratio represents the constant effect of a predictor X, on the likelihood that one outcome will occur

People-centered health services involve an approach to care that consciously adopts the perspectives of individuals, families and communities and sees them as participants as well as beneficiaries of trusted health systems that respond to their needs and preferences.

P-value: When you perform a hypothesis test in statistics, a p-value helps you determine the significance of your results. ... The p-value is a number between 0 and 1 and interpreted in the following way: A small p-value (typically ≤ 0.05) indicates strong evidence against the null hypothesis, so you reject the null hypothesis.

Retention in HIV care means a person living with HIV who is enrolled in HIV care routinely attends these services in accordance with the need. This excludes people who have died or who were lost to follow-ups.

ABSTRACT

Introduction

Despite tremendous gains in HIV treatment, accessibility and scale-up, initiation into care among patients who test HIV positive remains low. Recent research (MOH, 2017; Andrew, 2017) estimated that, Uganda had only about 64% of the 1.3 million HIV positive clients enrolled into ART. At this rate of enrollment, it is unlikely that the country will attain the 90-90-90 UNAID target by 2020. In Wakiso district, Uganda AIDS Commission (2016) estimated 570 girls and young women aged 15 to 24 were getting infected with HIV every week, without statistics of the incidence rates in the general district population, whose prevalence among the 2,007,700 population is at 10.6% (UBOS, 2017). This study was conducted to understand ART initiation levels in outreaches where factors associated with ART initiation were to be determined.

Methodology

The study was cross-sectional that employed quantitative and qualitative methods of data collection and analysis, data was analyzed using STATA. Binary logistic regression analysis was also used to come up with the model with use of both crude and adjusted odds ratio to clearly deduce the actual conclusion, this was selected since ART initiation (dependent variable) had two outcomes of yes and No, where No was coded=0 and yes=1. Binary Logistic regression identified whether the factors were significant or not on the dependent variable. During the analysis all the 3 of data analysis types where employed; Multivariate analysis (use of Binary logistic regression), bivariate analysis (use of cross tabulations) and univariate analysis were all applied. The sample was purposively selected from the various outreaches among clients who tested positive

Results

This study interviewed 135 HIV positive patients from the outreaches, of which 91.8%(124/135) were initiated on ART immediately following the test and treat guidelines, with a p-value of 0.2975, individual characteristics of respondents were not statistically significant at effecting ART initiation, health facility factors did also not directly affect ART initiation with a p-value of 0.1673, as well as social-cultural factors which had no significant effect on ART initiation among the respondents with a p-value of 0.6906. In comparison with district ART initiation levels in the period of April-June 2019, the district non-initiation level was at 8%

Conclusions and recommendations

Wakiso district has high levels of ART initiation because of the test and treat policy which was introduced by Ministry of Health. However, MOH, Health facilities, district leadership and all stake holders should ensure that people are sensitized routinely on HIV and ART initiation, to bring HIV Testing Services (HTS) nearer to the people, reduce on the long waiting time spent by clients, provide HTS in relation to other services especially those that prevent them from contracting HIV virus like condoms, screening and treatment for STI to ensure that the 90-90-90 UNAIDS targets are achieved by 2030 as well as encouraging cultural and religious leaders to embrace the UNAIDS targets.

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.0 Introduction

Since the start of Human Immunodeficiency Virus (HIV) epidemic, an estimated 77.3 million people worldwide have become infected with HIV and 35.4 million people have died of AIDS-related illnesses. In the report by UNAIDS (2017), in 2017 about 36.9 million people were living with HIV (with 1.8 million being children), which translates to a global HIV prevalence of 0.8%. The report also underscores that about 25% of the 0.8% infected population does not know that they have the virus and only 21.7 million people (59% of all people living with HIV) are on ART. As well, there are roughly 1.8 million new HIV infections globally, about 5,000 new infections daily (including 180,000 children below 15 years). There were also a reported 940,000 deaths due to illness related to Acquired Immune Deficiency Syndrome (AIDS). According to the same report (ibid), approximately 75% of people living with HIV globally are aware of their HIV status. About 21.7 million people living with HIV (59%) are accessing Antiretroviral Therapy (ART) globally.

The vast majority of people living with HIV are located in low- and middle- income countries, with an estimated 66% living in sub-Saharan Africa. Among this group, 19.6 million are living in East and Southern Africa which saw 800,000 new HIV infections in 2017 and only 66% of the 19.6 million HIV positive people were on ART and a reported 380,000 death related to AIDS in the same year. An estimated 800,000 new infections in East and Southern Africa, South Africa accounted for one third (270,000). Another 50% occurred in the eight countries of Mozambique, Kenya, Zambia, Tanzania, Uganda, Zimbabwe, Malawi, and Ethiopia.

According to the Uganda Demographic Health Survey (UDHS) of 2016, and (UBOS and ICF, 2017), an estimated 1.3 million adults and children were living with HIV in Uganda; the Spectrum model estimated that there were approximately 52,000 new HIV infections and 28,000 HIV-related

deaths in 2016. And in another recent report by Uganda Population-Based HIV Impact Assessment (UPHIA, 2017), there was a slight reduction in both the prevalence and the incidence rates of HIV and as well a decrease in the number of death related to AIDS in 2017. Uganda had an estimated 1.3 million people (approximately 6.3% of the general population; 7.6% females 4.7% males) living with HIV, with a reported 50,000 new infections. Only 64% of the general HIV positive population were enrolled into ART, yet at the end of 2016, there were an estimated 26,000 deaths due to AIDS-related illnesses (Andrew, 2017)

1.1 Background to the study

AIDS had remained a mystery to many people until 1980's when the National Cancer Institute announced in 1984 that they had found the cause of AIDS, the retrovirus HTLV-III (UNAIDS, 2017). In a joint conference with the Pasteur Institute they announced that LAV and HTLV-III are identical and the likely cause of AIDS. A blood test was created to screen for the virus with the hope that a vaccine would be developed in two years. This provoked the WHO in 1987, to launch the Global Program on AIDS to raise awareness; generate evidence-based policies; provide technical and financial support to countries; conduct research; promote participation by NGOs; and promote the rights of people living with HIV including declaring 1st December as the International AIDS Day.

This was followed with the advent of antiretroviral therapy (ART) in 1996 which brought with it an urgent need to develop models of health care delivery that could enable its effective and equitable delivery, especially to patients living in poverty. Community-based care, which stretched from patient homes and communities, where chronic infectious diseases are often best managed to modern health centers and hospitals, offered such a model, providing access to proximate HIV care and minimizing structural barriers to retention.

Mushi, et al. (2017) observed that the initiation in to care is the bridge between HIV testing and

HIV treatment, care and support. They also discussed that timely HIV diagnosis and effective linkage into care and treatment are key to improved outcomes. This meant that all individuals diagnosed HIV positive must be linked to HIV care and treatment even if local treatment guidelines do not indicate that a person should be started on antiretroviral therapy immediately.

Yet, initiation and adherence to any therapy is determined by a complex matrix of factors affecting patient's ability to take medications and a health system's ability to facilitate access to high-quality care (Mukherjee, et al., 2006). To address patients' social and economic needs and to overcome structural barriers to good health, community-based decentralized care became the norm for HIV care delivery in the global scale-up of ART. However, the success of community-based, decentralized care had by 2015, resulted in the enrollment of only estimated 15 million people on ART worldwide (UNAIDS, 2015) though efforts had been spawned to leverage disease-specific health initiatives to comprehensively strengthen health system.

Against this backdrop, research by Larson, Bertozzi and Piot (2011) and bucked by Piot, et al. (2015) showed that the sustainability of ART scale up programs needed to come into critical focus. Service delivery design alternatives to the traditional model of physician-centered, clinic-based care became critical in SSA (Rabkin and El-Sadr, 2011). Further research (Hirschhorn, et al., 2013) also revealed that alternative delivery service models were needed in providing HIV services in SSA. Further still, devising service delivery models that are suited to resource-limited contexts was acknowledged as an important strategy for fostering the sustainability of ART scale-up programs in SSA (Duncombe, et al., 2015). This was first recommended by Bemelmans, et al. (2014) in their findings about Community-supported models of care for people on HIV treatment in SSA. Sustaining and expanding ART coverage in resource-limited settings required modifications and adaptations of ART delivery models to meet the continually rising demand (Bemelmans, et al., 2014).

Sub-Saharan Africa, the region with the highest HIV/AIDS burden in the world (UNAIDS, 2017) accelerated access to ART depended substantially on external donor support principally through The President's Emergency Plan for AIDS Relief (PEPFAR) and The Global Fund (Hecht, et al., 2010). PEPFAR and The Global Fund supported a rapid expansion in ART coverage in SSA in an approach later known as WHO's public health approach of ART roll-out to the largest number of HIV-positive people possible (Gilks, et al., 2006). However, indicators from international investments for ART scale-up showed a slowdown and even a decline in some estimates (Kavanagh, Headley and Russell, 2015), the same findings by Katz, et al., 2014; USAIDS, 2014; and Henry, et al., 2014.

In September 2015, the Sustainable Development Goals (SDGs) retained the goal of universal access to HIV treatment in the new international development agenda United Nations sitting, UN 2030 agenda (UN, 2015). This followed after the WHO announced new universal treatment guidelines for ART which supported initiation of ART for all individuals living with HIV independent of their immunologic or clinical status, i.e. the test and treat guidelines (WHO, 2014). Since then, countries throughout SSA adopted the "Universal Test-and-Treat" (Test and Treat) strategy, including Uganda (MOH, 2016). The strategy is expected to contribute to improved client outcomes and attaining UNAIDS 90-90-90 treatment targets, specifically the ART coverage target by 2030.

In Uganda, in 2016 the National HIV Testing Services (HTS) Policy and implementation guidelines was updated. This was part of the response by government to make HIV and AIDS epidemic an integral part of the Health Sector Development Plan 2016-2020; and the National HIV and AIDS Strategic Plan (NHSP 2015/16 – 2019/20). It was also to ensure that HIV Testing Services are offered within a legal and human rights framework ensuring quality counseling, confidentiality, informed consent, giving of correct results and connecting those tested to further

care and prevention. Most importantly, the 2016 updated guide aimed at galvanizing efforts to achieve the first and second 90s of the UNAIDS fast-track 90-90-90 targets for Uganda.

Further still, in 2016, following the announcement by WHO in 2014 on the new guideline of "Test and Treat" of all HIV positive persons, Uganda adopted the test and treat policy (WHO, 2017). The test and treat, sometimes called test and start policy meant immediate initiation in ART of every person who tests HIV positive. The policy was in a bid to improve lives of people living with HIV by having them being started on ART immediately upon confirmed HIV positive results. This also hoped to ensure full ART coverage to all HIV positive persons throughout the country.

To strengthen the strategy, the government adopted a range of innovative strategies on how to provide comprehensive HIV services more effectively and efficiently, and to initiate, enhance retention and adherence to ART. These programmatic adaptations have been described as ways of "differentiating" how HIV care and ART services are delivered. This aimed at identifying, preventing, diagnosing, treating and supporting people in need of HIV and/TB services. This was also called tiered care, client-centered care or client-tailored care. Differentiated service delivery (DSD) would lead to better outcomes for clients based on meeting individual needs, including improved coverage and quality of HTS, while using resources effectively and efficiently.

To ensure success in DSD, services would be delivered among others, through outreaches. The purpose of HTS outreach model was to provide HIV care to the underserved communities with the aim of taking services closer to clients' homes. In this outreach model, clinical services are taken to the community and delivered by qualified health care providers. It involves movement of a clinical team from an accredited ART – providing health facility or Public health unit to a location in the community that is convenient for both the health care team and the clients. The outreach approach targets priority populations that otherwise have limited access to HTS Services. Outreach HTS include; Door-to-door HIV testing which should be implemented only in high HIV prevalence

settings or communities with key populations such as the fisher folk or hotspots for sex workers; HTS integrated into health outreaches like immunization or Voluntary Medical Male Circumcision (VMMC); and HTS outreaches in locations frequented by target populations like key population hotspots, sporting events or workplaces. These outreaches could include moonlight testing and mobile clinics (MOH, 2017).

With all the outlined strategies being implemented, only estimated 64% HIV positive clients of the 1.3 million HIV positive population is receiving ART (ibid). It's likely that the 90% target by year 2020 may not be achieved with the current trend and if factors influencing ART initiation especially in outreach models are not examined. And with about 570 girls and young women aged 15-24 years of age in Wakiso district being infected with HIV weekly in 2017 alone, Wakiso is experiencing a high burden in the spread of HIV whose prevalence already stands at 10.6% in the district population. While the figures speak loud of the testing and prevention, little information is recorded about the initiation of these HIV positive clients into care support at outreaches not alone in Wakiso district, but the country wide. And no information is available on the factors influencing ART initiation in these outreaches. It's upon this background that this study intends to explore ART initiation levels and as well examine the factors that influence ART initiation in outreaches in this case those conducted by the Health Center III's, Health Center IV's and Entebbe Hospital in Wakiso district.

1.2 Background to the study area

Wakiso District is located in Uganda's Central region and shares borders with Kampala, Mpigi, Nakaseke, Mityana, Mukono and Kalanagala districts. Wakiso, which was curved of Mpigi with an aim of improving service delivery, is the second most populated district in Uganda with a population of 2,007,700 as per the 2014 census and a growth rate of 4.1%. The population density

is 700 persons per square kilometers. The ratio of male to females is 90 male per 100 females. It covers total areas of 2807.75 square kilometers.

Wakiso being an urban center and one of the highly populated district in Uganda, it attracts all categories of people including the youth, men and women, the sexually active men, prostitutes, Lesbian, Gay, Bisexual and Transgender (LGBT) group, the drug addicts and many other categories of people. Besides, there are so many slums and hotspots in the district that attracts these categories of people to risk factors to HIV/AIDS.

With its seven (7) Health Sub Districts, the district has 104 Government aided Health facilities; 67 purely government and 37 being PNFPs facilities. About 45% of the district population is within 5km reach of the Health facilities with 2,800 Village Health Teams (VHTs) trained in the basic package provision, with at least 4 per village. With 55% of the population not within the reach of 5km health center distance, majority of people cannot access basic health services such as HTS at convenience due to long distances to the health facility. Outreaches are therefore paramount and a bridge to this gap, since some services are taken closer to the communities.

UAC (2016) revealed that, about 570 girls and young women aged 15 to 24 were getting infected with HIV every week and the district had a staggering 10.6% HIV prevalence among its 2,007,700 population. This is higher than the average prevalence rate in urban areas in Uganda, which is at 7.5%, and as well higher than the average prevalence in central Uganda which is at 8.1% (UPHIA 20017). This ranks Wakiso district among the districts in the country with highest HIV prevalence. And to ensure that all these population is enrolled in ART, it's important to identify factors influencing ART initiation especially in outreaches that were created to supplement the efforts of the established ART treatment points.

1.3. Problem statement

In Public Health discourse, HIV continues to be a serious and devastating disease across the globe (WHO, 2016). In response to the spread of HIV in Uganda, testing for HIV began in 1990 with Voluntary Counseling and Testing (VCT) as the main approach adopted. The country developed the first VCT policy in 2002, and since then, several reviews to the policy have been carried out and most notably the National Policy Guidelines for HIV Counseling and Testing in 2005, among others, until recently (2016), the "test and treat" policy (MOH, 2016). The aims and objectives of the policies were; to provide a framework for providing HTS in Uganda; to empower health workers and counselors to provide HTS appropriately to all people; to make HTS part of the wider health care system to help bring about positive behavior change and to roll out HTS using different models such as outreaches and home-based where everyone in need on HTS would be able to access with convenience (MOH, 2016).

Despite these tremendous gains in treatment accessibility and scale-up, initiation into care among patients who test HIV positive remain low. Recent research (MOH, 2017; Andrew, 2017) estimated that, Uganda had only about 64% of the 1.3 million HIV positive clients enrolled into ART. At this rate of enrollment, it is unlikely that the country will attain the 90-90-90 UNAID target by 2020. In Wakiso district, UAC (2016) estimated 570 girls and young women aged 15 to 24 were getting infected with HIV every week, without statistics of the incidence rates in the general district population, whose prevalence among the 2,007,700 population is at 10.6% (UBOS, 2014).

The questions then would be, despite government efforts in rolling out HTS in all parts of the country, where everyone in need of the service can easily access, why has the percentage of HIV positive clients enrolled into ART remained low in the country? What are the ART initiation rates/levels during outreaches that were sought to be part of the solution to the low access to ART enrollment? What influences ART initiation rates in outreaches?

When this research is carried out, ART initiation levels in outreaches will be known and factors associated with ART initiation will be determined. This information generated may be used to promote initiation into ART especially in outreaches through providing recommendations that the Ministry of Health and implementing partners can adopt, and this research will thus contribute to the attainment of the UN sustainable developmental goal (SDG) three of "*good health and wellbeing of all at all ages"* and UNAIDS goal of Zero new HIV infections by 2030.

1.4. Theoretical and Conceptual Framework for initiation into ART of HIV positive clients

Over the years, various theories and models have been developed to help understand health seeking behavior (UNAIDS 1999; Mackian, Bedri and Lovel, 2004). The social ecological model is one of them. The social ecological model provides a comprehensive approach for exploring and encapsulating the wide ranging individual and non-individual factors that influence health seeking behaviour. It positions health-seeking behaviour in a 'social ecology' (Roura, et al., 2009) in which health-seeking is influenced by an array of personal, interpersonal, health-system and structural-level factors, all embedded in a 'social ecology, (figure 1).

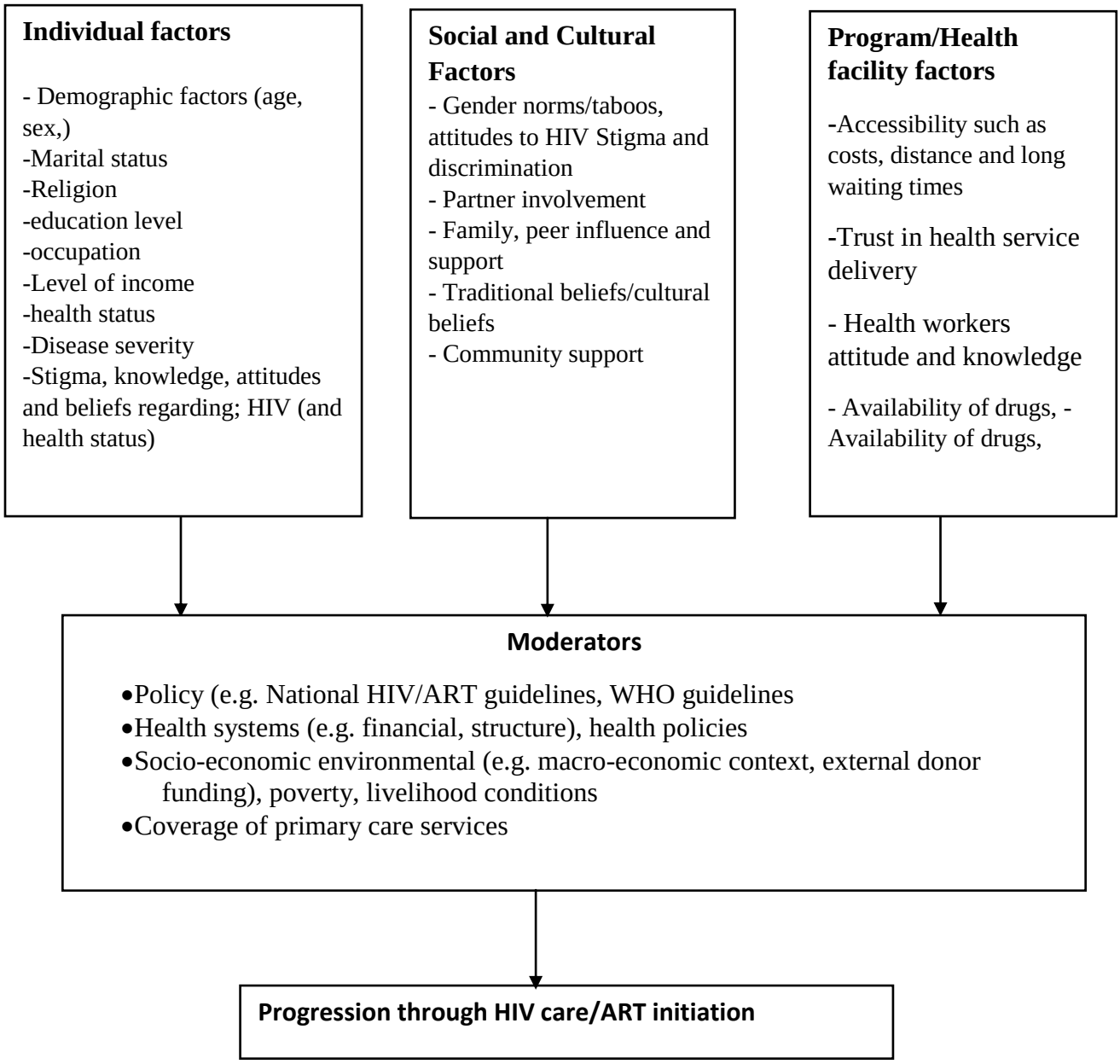


Figure 1. Schema of the social-ecological framework.

1.5 Study objectives

1.5.1 General objective

To determine factors influencing initiation into ART of HIV positive clients at the HTS outreaches in Wakiso district

1.5.2. Specific objectives

1. To determine the level of initiation of HIV positive clients into ART during the HTS outreaches in Wakiso district.
2. To find out individual factors influencing initiation into ART in HIV positive clients in HTS outreaches in Wakiso district.
3. To examine the social-cultural factors influencing initiation into ART in HIV positive clients in HTS outreaches in Wakiso district.
4. To investigate Health facility factors influencing initiation into ART in HIV positive clients in HTS outreaches in Wakiso district.

1.6. Research Question

1. What is the level of initiation into ART of individuals who test HIV positive during the HTS outreaches in Wakiso district?
2. What are the individual factors influencing initiation into ART in HIV positive clients in HTS outreaches in Wakiso district?
3. What are the social-cultural factors influencing initiation into ART in HIV positive clients in HTS outreaches in Wakiso district?
4. What are the Health facility factors influencing initiation into ART in HIV positive clients in HTS outreaches in Wakiso district?

1.7. Scope of the Study

1.7.1. Content/Subject Scope

The study interrogated the initiation aspects and process of the HIV positive clients in to care support during outreaches organized by Health facilities in Wakiso district. This study then paid specific and close attention to the Demographic, individual, health facility and socio-economic factors that influence the initiation of the HIV positive clients to care/ART in Wakiso district**.**

1.7.2. Geographical Scope

The research on ART initiation in HIV positive clients in outreaches was conducted in Wakiso district, particularly in the Health Center III's and IV's that carry out routine HTS outreaches.

1.7.3. Time Scope

This research was conducted between the May and June 2019. This enabled the researcher to collect adequate data to inform this study and also cover the necessary areas and hotspots in the district since HTS outreaches target these points

1.8. Significance of the Study

The study was able to generate information and knowledge on the initiation process of the HIV positive clients, factors affecting their initiation and how initiation into ART could be promoted or improved in the area. This information is relevant for both the state and non-state actors working with People living with HIV. It may also to generate alternative policy response and decision for leaders both local and national level to allocate resources for the HIV/AIDS program in their planning process. This study may also help to generate incites and bridge knowledge gap in public health discipline so that future researcher could use the findings of this study to inform their work in the world of Academia.

1.9. Justification of the Study

Many studies have been conducted on the prevalence rate of HIV among different categories of people in the community including the uptake of HTS, and others but no information is available on the initiation of these positive clients in to care support specifically in the outreach centers. This explains why this study employed the outreach model to understand this process and how this could be affecting the lives and health of the positive clients in the area.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

A literature review is both a summary and explanation of the complete and current state of knowledge on a limited topic as found in academic books and journal articles. The purpose of a literature review is to provide foundation of knowledge on topic; identify areas of prior scholarship to prevent duplication and give credit to other researchers; identify inconstancies gaps in research, conflicts in previous studies, open questions left from other research. Therefore, this chapter presents a critical analysis of ART initiation levels, individual, socio-cultural and health facility/outreach factors influencing ART initiation.

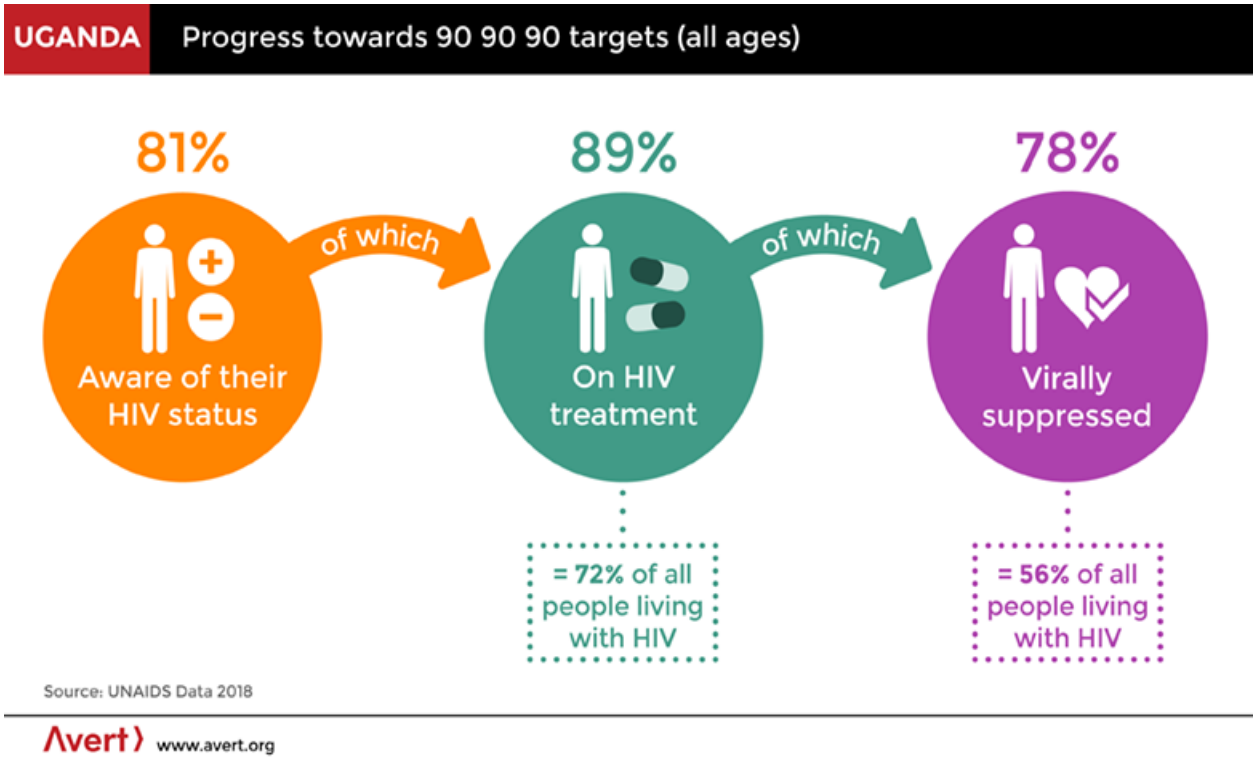
2.1. Level of initiation of HIV positive clients into ART

In the report by UNAIDS (2017), Uganda has 1.3million people living with HIV, and 5.9% are adults between 15-49 years, 50,000 cases of new infections, Women are disproportionately affected, with 8.8% of adult women living with HIV compared to 4.3% of men, 26,000 AIDS related deaths, 64% of the adults and children are reported to be on antiretroviral treatment.

The same report highlighted that other groups particularly affected by HIV in Uganda are sex workers, young girls and adolescent women, men who have sex with men, people who inject drugs and people from Uganda's transient fishing communities. There has been a gradual increase in the number of people living with HIV accessing treatment. In 2013, Uganda reached a tipping point whereby the number of new infections per year was less than the number of people beginning to receive antiretroviral treatment. However, as of 2016 around 33% of adults living with HIV and 53% of children living with HIV were still not on treatment. Persistent disparities and questions remain around who is accessing treatment and many people living with HIV experience stigma and discrimination which are major issues to the health of the clients? This is the main interest of this

study that will interrogate whether these statistics actual speak to the realities of these clients in Uganda.

Figure 2: Showing Uganda's progress towards 90 90 90 targets



Globally and in Africa, more people living with HIV than ever before are accessing treatment, more people know their status, and AIDS-related deaths are declining (UNAIDS, 2015). New HIV infections among young people aged 15–24 years are also declining (460 000 new infections in 2013 compared with almost 715 000 new infections a decade earlier). This progress, however, belies a dangerous reality, the young African women and adolescent girls are especially vulnerable to HIV.

In the World Health Organization (WHO) report of 2014, the transmission of HIV from a HIV-positive mother to her child during pregnancy, labour, delivery or breastfeeding ranged from 15% to 45%. This rate could be reduced to below 5% with effective interventions during the periods of

pregnancy, labour, delivery and breastfeeding through initiation to ART services. However, if HIV-infected women begin ART during pregnancy and continue throughout breastfeeding, MTCT of HIV can be reduced to less than 5%. Initiation into ART is thus determined by a policy.

Sanga. et al. (2017) in their study on linkage into care of newly diagnosed HIV positive individuals tested through outreaches and facility based HIV testing models in Mbeya region in Tanzania, found that, linkage to care in the group of people tested through the facility-based model was significantly higher compared to the group tested through the mobile/outreach services. More people were linked to care, and they linked modestly sooner in the health facility than mobile clinic arm. In their study, 78% of individuals of the overall cohort had registered at Care and Treatment Centers (CTCs) within the first 6 months after diagnosis in outreaches, compared to 90% successful linkages in facility based. However, this represented a dramatic improvement in linkage to care after HIV diagnosis in outreaches compared to the recent past in Tanzania (Simmelink, 2014). This aligns with earlier studies in Kenya, South Africa and systematic review and meta-analysis of community and facility-based HIV testing (Genberg, et al., 2015 and Bassett, et al., 2014).A meta-analysis study conducted in the USA on entry into medical care after HIV-positive diagnosis also reported high entry by people testing at clinics and hospitals compared to other community testing settings (Marks, et al., 2014). This implies that outreaches may be a less acceptable model of testing and initiation of HIV positive clients into ART compared to the facility based model.

However, other studies on HIV testing and linkage to care in other SSA countries have also reported linkage rates of more than 60% during HTS outreaches (Genberg, et al., 2015; Bassett, et al., 2014; Sharma,et al. 2015 and Rasschaert, et al., 2014). The findings likely reflect a combination of health system and social changes, including reduction in stigma and regularly contacting and following up HIV-positive individuals. Sanga, et al. (2017) further noted that, while there are

dramatic improvement in linkage across the overall cohort and the early linkage to the first step of care, the continued gap in linkage to care between mobile-based and facility-based testing is important to address.

However, significant health system level barriers must also be addressed to ensure timely linkage and ultimately, retention in care in HTS outreaches. More expansion of mobile staging and ART services in remote areas will help improve on ART initiation. Further still, healthcare providers should ensure that education and emphasis on the importance of being in HIV care, even if the client does not yet require ART according to local guidelines, are emphasized during counselling. This study will therefore seek to find out the level of ART initiation of HIV positive clients in HTS outreaches in Wakiso district

2.2. Individual factors for initiation of HIV positive clients into ART in HTS outreaches.

2.2.1 Socio-Demographic attributes; age, education level and residency

In a study by Hodgson, et al. (2014), *age* was found to be associated with ART initiation, adherence and retention in several of the included studies, albeit in contrasting ways. Two studies, one from Tanzania (Cohn, et al., 2008) and one from the US (Kirsten, et al., 2011), found that younger women and men were less likely than older women to engage with the health system and therefore less willing to enroll into ART. This was because these older women and men living with HIV had children under 18 years whom they have to take care of.

Education was also noted as an important factor in ART initiation. Two studies from Kenya and one from the US found that women's and men's education level was positively associated with ART initiation. Ayuo, et al. (2013), in their Kenyan study of pregnant women initiating ART, reported that each additional year in school increased the likelihood of reporting perfect initiation and adherence by 10.6 percent. Similarly, a study in Rwanda found that women with lower education levels were less

likely to participate in an sdNVP program. The study's authors posited that higher education levels contributed to better health literacy, which in turn promoted sdNVP program initiation and adherence (Delvaux, et al., 2009).

Client place of residency also influences the decision to start ART. Two studies in Kenya found that rural residency was a barrier to ART initiation and adherence. In the first study, women enrolled in HIV care at a rural clinic were more likely to be lost to follow-up than women enrolled in similar care in a district hospital (Ayuo, et al., 2013). In the second study, a qualitative narrative analysis, HIVinfected pregnant women in rural settings were less likely to disclose their HIV status than urban women. The authors argued that these women, in striving to keep their status a secret, were less to start ART and more likely to miss clinic appointments, resulting in poor ART adherence (Ujiji, et al., 2011)

2.2.2 Longer, healthier life.

Rena, et al., (2016) on his study found that to many or a large majority of HIV positive clients, initiating ART represented the need to live a longer and healthier life. Male participants frequently stressed their improved health so as to continue to provide for their families while female participants frequently contextualized their improved health enabling them to able to care for their children longer and preventing their children from facing orphan-hood. Thus a need to live longer and have a healthy life and children is one of the factors influencing initiation into ART.

2.2.3 Prevent HIV transmission to partners or children and continue their relationships.

According to Rena, et al., (2016), several participants in their study identified their motivation to get initiated into ART to prevent HIV transmission to their partners or children, with prevention to children being stressed more commonly by female participants. Furthermore, both male and female participants noted that the use of ART facilitated remaining in their discordant partnerships and

allowing their partnerships to thrive. A study on ART initiation in HTS outreaches in Wakiso will seek to investigate if the same reason will be cited as a motivation to be initiated into ART.

2.2.4 Appear normal or healthy in order to avoid disclosure, stigma, and discrimination.

Rena, et al. (2016) also noted that, both male and female HIV positive clients wanted to initiate into ART in order to look "normal" or "Healthy". Clients noted being perceived as "normal"- looking was important to them, in order to avoid disclosure of their HIV status to their partners or community members. They particularly felt that ART use avoids disclosure of their HIV status there by improving their interaction with family and community members and preventing social isolation.

2.2.5 Knowledge of HIV and ART

In three studies in Uganda, South Africa, and Tanzania, a lack of knowledge about health services and/or ART was associated with poor ART initiation and adherence (Mepham. et al., 2011). A study in Ghana (Boateng, Kwapong, and Agyei-Baffour, 2013) also found that many study participants who had a high level of essential HIV knowledge (e.g., routes of transmission; the role of ARVs in prolonging life) were more likely to accept enrollment to ART but that women with inadequate knowledge of ART were significantly more likely to refuse to be initiated into ART.

2.2.6 Fears and Aspirations Related to HIV and ART

Several studies have identified clients' fears as barriers to ART initiation and/or adherence. For example, fear of losing a job or fear of being HIV-infected contributed to inaction and/or denial about one's HIV status. Some studies found that HIV positive clients feared HIV testing or the ARVs themselves, including a South African sdNVP study (Stinson, and Myer, 2012) and studies on ART in Tanzania and Malawi (Bwirire, et al., 2008; Watson-Jones, 2012). A South African study found women's unwillingness to commit to lifelong treatment as a barrier to ART initiation (Myer, et al., 2012). Furthermore, two studies from the US and Australia found that women feared ART would have a negative impact on their children (McDonald, and Kirkman, 2011; Mellins, et al., 2008)

Another Kenyan study found that women were reluctant to attend clinics for ART services because their visibility during long waiting times could reveal their HIV status and, in turn, enhance their risk of being stigmatized and perceived as incapable mothers (Awiti, et al., 2011), thus refusing to initiate into ART.

2.2.7 Disclosure.

Successful prevention, control and management of HIV infection in part depends on disclosure of HIV status to family members, friends and most importantly sexual partners (WHO, 2003). For instance, women who disclose their HIV status to their partners are more likely to participate in prevention of mother-to-child transmission of HIV (PMTCT) programs (Medley, et al. 2004; WHO, 2003); and people who disclose their HIV status have better adherence when initiated into ART (Waddell and Messeri, 2006). Various studies have revealed different effects of disclosing one's HIV positive status. The negative outcomes have included blaming the PLHIV for 'loose morals' because of the association of HIV infection with sexual promiscuity (Greeff, et al., 2008), being disowned, abandoned and rejected or deterioration in relationship with social network members and partners (Greeff, et al., 2008) and verbal and physical abuse (Kilewo, et al., 2001; Greeff, et al., 2008).

In HIV related studies among pregnant mothers, studies in Zimbabwe and South Africa identified positive experiences with disclosure as enablers of ART initiation during pregnancy. Specifically, women in the Zimbabwe study reported that disclosure to someone other than their spouse had been beneficial to their initiation and adherence to ART (Kuonza, Tshuma, Shambira, and Tshimanga, 2010). The South African study similarly found that disclosure not resulting in stigmatization was positively associated with maternal ART initiation and adherence (Peltzer, Sikwane, and Majaja, 2011). A third study from Kenya found that having ART clinics separate from main hospital buildings

reduced clinic attendance and ART initiation; women were concerned their HIV infection would be disclosed publicly by their attendance at the HIV-only sites (Awiti, 2011)

Subsequent disclosure of HIV sero status to one's sexual partners allows couples to make informed decisions about sexual behavior and ART. Couples' communication around HIV in general is low in Uganda – 83% of men and women age 15-49 have never discussed HIV with any sexual partner (Uganda Ministry of Health & ORC Macro, 2006). Knowledge of partners' HIV sero status is even lower; an estimated 89% of similarly aged men and women do not know the HIV status of *any* of their partners. Without this essential follow-step to HCT, the benefits of counseling and testing are limited.

A quantitative and qualitative study conducted with HIV-infected TASO clients in Jinja provides the most comprehensive account of benefits and barriers to disclosure of HIV status in Uganda to date (King. et al., 2008). Interestingly, 83% of survey respondents disclosed (to anybody) the same day that they received the test results. Men were most likely to disclose their HIV status to their sexual partners (27%) and brothers (21%), and women to their sisters (21%) and mothers (19%). Perhaps even more encouraging is the fact that 87% of both men and women said it was not difficult to disclose their status, suggesting that disclosure may not be as hard as typically thought. However, this TASO client population may not necessarily be representative of HIV-infected persons aware of their status in Uganda as a whole. Therefore, disclosure of HIV status is a very important factor to ART initiation.

2.3 Socio-cultural Facility factors for initiation of HIV positive clients into ART in outreaches

2.3.1 Spouse or partner involvement.

Many studies have highlighted the role and impact of a spouse/partner on ART initiation, adherence, and/or retention. It is one of the most widely reported findings across the reviewed studies. Studies in Rwanda, Uganda, and Malawi found that women often felt a need for their

partners' permission to initiate, adhere to, and be retained in ART care. In a rural Tanzanian study, women reported being dependent on their partners for transportation to health facilities, so consistent participation in an ART program was difficult if they had not disclosed their status (Kirsten, et al., 2011). Similarly, in Uganda, non-disclosure of HIV status to a partner was the second most commonly cited barrier to enrolling in a PMTCT program (Duff, et al., 2010). Many of these women explained that economic dependence on their husbands and/or fear of domestic violence inhibited them from disclosing their status. Domestic violence - actual or anticipated - was also reported as a barrier to disclosure and ART initiation and ART adherence in a South African study among HIV positive women (Mepham, et al., 2011). Several studies assessed the impact of a partner's involvement in a woman's HIV care. Partner involvement was indicated by factors such as knowledge that the woman had been referred to HIV treatment, accompanying her to health appointments, or participating in couples counselling. In Kenya and Zambia, studies identified partner involvement as an enabler of ART initiation.

However, Rena, et al. (2016) also found stigma as one of the reasons why some patients do not initiate ARV treatment. Healthcare providers had reported that patients do not want to disclose their HIV status to either their marital partners or other members of their social network for fear of domestic violence, partner abandonment, or rejection by the community. Thus they avoid to be initiated into ART for fear their partners may get to know of their HIV status. Therefore, partner/spouse involvement has an influence on ART initiation in HIV positive clients.

2.3.2 Family support

Family members can influence initiation into ART of a family member. In many studies, family members were cited as either important facilitating or inhibiting influences by different studies. A family's embrace of community norms around stigma and the consequent pressure to maintain role and status within families can lead women in particular to keep HIV infection a secret, creating a

barrier to ART initiation and adherence. This relates to the barrier created when decision making about the pregnant woman's health/health care is made by an elder female family member, as seen in a Kenyan study (Ujiji, et al., 2011)

2.3.3 Social stigma and discrimination

Roura, et al. (2009) argue that individuals' behaviour with regard to initiation into care is influenced by factors in the immediate environment such as support (or lack thereof) from significant others, work schedule, and social stigma. Patients may fail to initiate into ART in spite of their knowledge of the importance of initiating because their personal experience may be more persuasive than medical information. They affect patient lifestyle by causing stress, social isolation, and fear of rejection (Dewing, et al., 2015). When a patient's emotions, opinions, or behaviors are affected by others, initiation; adherence and long-term retention to ART are affected (DiMatteo, 2004). The social factors may include experiences, interpersonal relationships with marital partners, and family members that in turn affect individual health seeking behaviour and actions.

Prejudices and social discrimination are some of the leading causes for certain groups of Uganda's population, such as sex workers and men who have sex with men, to avoid seeking health care or HIV testing. However, even the general population of people living with HIV is subjected to social stigma and negative judgment. A 2015 survey conducted by HIV support organizations, in partnership with the National Forum of People Living with HIV/AIDS (NAFOPHANU), of people living with and affected by HIV in central and south-western Uganda found social stigma, both internal and external, to be high. When the study began, more than half (54%) reported experiencing some form of discrimination or prejudice as a result of having HIV and thus affected the ART initiation.

> "…during this survey, we found out that internal stigma, characterized by loss of hope, self-condemnation and suicidal thoughts, were predominant especially among those…who had just tested positive." …Stella Kututsi, Executive Director of NAFOPHANU.

The People Living with HIV Stigma Index 2013 found the most common forms of external stigma and discrimination directed at people living with HIV were: gossip – experienced by 60% of survey participants; verbal harassment, insults and threats – experienced by 37%; sexual rejection experienced by 21.5%. Experiences of all forms of internal stigma were higher among women than men. This is a critical factor that needs to be investigated before initiating the HIV positive clients in to care support at outreach centers in Wakiso district.

2.3.4 Religious Beliefs and Faith in God

Religion was found to influence initiation, adherence and retention in three studies. In a quantitative study in Uganda, being Christian was found to be a predictor (through correlation) for ART initiation and adherence among women over 25 years of age (Nassali, et al., 2009). Another quantitative study in Zimbabwe found that belonging to a religion that promoted the use of traditional herbs during pregnancy (i.e., not biomedical care) reduced visits to antenatal care (ANC) clinics and/or use of sdNVP (Kuonza, Tshuma, Shambira and Tshimanga, 2010). Similarly, a mixed-method study from Ghana found that the use of alternative medicines and/or participation in overnight prayer camps contributed to ART interruption and loss to follow-up (Boateng, Kwapong, and Agyei-Baffour, 2013). In the studies, both patients and healthcare workers agreed that some church pastors in their communities who conduct healing prayers sessions persuade patients to decline enrolling into ART and discontinue ART because they will be healed.

Maurice, (2013), also noted that, personal relationship with, and trust in, a Supper natural being (God) also led to patient attrition from ART care. He cited that a majority of the respondents

interviewed professed being Christians and some narrated how being 'born-again' and their 'personal relationship' with God dissuaded them from continuing with treatment. His observations revealed that some local Pentecostal churches hosted healing sessions for people suffering from different ailments, including HIV. One Pentecostal church conducted healing prayer sessions every Saturday; on the wall of the local church read the banner: *"Come for counseling, deliverance and healing from all sickness and disease".* Another Pentecostal church conducted 'deliverance and healing' sessions every Wednesday and Thursday afternoon. During one of the church services, a middle-aged woman testified about how she was found HIV positive at a local public sector clinic and declined to start on medication but opted to put her faith in God. All these studies cited religion greatly having a negative influence to ART thus negatively affecting ART initiation of HIV positive clients

2.3.5 Perceived opposition from the community or religious groups

In the same study by Rena, et al. (2016), it was reported that, some participants noted they perceived opposition from some members of their community to widespread ART use. The participants had noted that because community members want an easy way of identifying who amongst them is HIV-positive, that they often don't want infected persons initiating ART because they now appear healthier or "normal." In other words, "normalization" of appearance with ART use makes it more difficult to know persons who are infected. While it was unclear how strong of an influence such perceived community opinions had on the individuals who had declined initiation of ART, this phenomenon was largely raised as a hypothetical barrier by those who had initiated ART. This study will therefore seek to determine if the same reason for declining ART initiation will be raised by clients in Wakiso district.

2.3.6 Gender barriers

Since the Domestic Violence Act and the Prohibition of Female Genital Mutilation Act were both enacted in 2010, there has been a promising decline in rates of gender-based violence (GBV). Nevertheless, the 2016 Uganda Demographic and Health Survey, the most recent available, shows 50.5% of ever-married women reporting physical or sexual violence from a spouse in the preceding 12 months. Women aged 20-24 are worst affected, with 40% experiencing recent intimate partner violence, compared to 31% of women aged 15-19 and 30% of women aged 25-49. The question is whether such circumstances affects the initiation into ART of HIV Clients in Wakiso district at outreach centers (UDH, 2016)

2.3.8 Traditional beliefs

Use of herbal remedies to treat HIV related illnesses was reported by both patients and healthcare providers as a cause for discontinuation from the ART program. Some patients were being told that herbal remedies could cure HIV and AIDS. This influences the health seeking behaviors of patients, leading to discontinuation of ART and failure to be initiated among the newly diagnosed. The use of herbal medicines was also reported to have been easily accessed by some patients especially those from rural (Mushi, et al. 2017)

2.4 Health Facility factors for initiation of HIV positive clients into ART in HTS outreaches.

Institutional related factors speak to the health system factors and these factors relate to the way health services are organized and delivered and relates to access to the facility and to medication, the overall environment of the facility, the patient–provider relationship, and support services that are incorporated into care. The following health system factors were identified: staff shortage, medication stock-out, congested facilities, long waiting times, and travel distance and cost of transportation (Scheider, et al. 2006)

2.4.1 Shortage of staff

Healthcare providers and patients identified staff shortage as a factor influencing retention in care of patients on ART. This is because staff shortages lead to long queues at the clinic waiting area and, consequently, long waiting times. Because of this, patients get frustrated and tired of waiting to be seen. It was also reported that several patients opt out of ART initiation because of long waiting times at the ART clinics (Scheider, et al. 2006).

2.4.2 Travel distances and cost of transport

Although ART sites do not charge for HIV related services, travel distance and additional costs incurred traveling to ART centers contribute to non-initiation in the care and lost to follow of patients on ART program more so for patients who cannot afford it. While some participants reported travel distance to ART centers as a barrier to accessing treatment, others also mentioned lack of money to pay for transport (Scheider, et al. 2006).

2.4.3 Availability of Youth friendly VCT services

This can be both a promoter and a detriment to initiation of the HIV positive youth in to ART services. According to young people ‘’Youth friendly services’ means that the counselor will not scold them for being sexually active or be judgmental (Juma et al., 2004; Likwelile, 2004). A study conducted among adolescents in Mpigi District of Uganda revealed that many of the males and females were interested in HIV testing and would be willing to be initiated into ART but concerned about confidentiality, the testing process, the accuracy of test results, and the cost of VCT services (Bohmer and Kirumira, 1997). This was similar to a study carried out in Zambia which found that privacy and service quality were also important to youth and they stressed the need for privacy in HTS and the availability of complete and accurate information (UNAIDS, 2002). Among surveyed youth (14 to 21), in Kenya and Uganda, 41 percent of untested youth and 38 percent of tested youth reported that they would prefer to get HTS at a youth friendly facility rather than at adult facility,

where they might encounter adults they know (Horizons, 2001). Based on such evidence, this study wants to understand from youth perspective as well whether it's true or not that youth friendly services is a key determinant to the initiation of HIV positive youth into ART services at Wakiso district.

2.4.4 Access to health services.

Difficulty obtaining or paying for transport to facilities was a barrier to ART initiation in studies from Uganda (Duff, P. et al. 2010), Tanzania (Wason, et al., 2012), Malawi (Bwirire, et al., 2008), and South Africa (Varga,, and Brookes, 2008). No studies specifically highlighted the costs of services as a barrier to ART initiation, adherence or retention. However, authors of a Kenyan study speculated that the cost of HIV service registration may have a negative effect on the whole HTS uptake. With more than 55% of population in Wakiso district living in more-than 5KM distance from a health facility, this study will seek to understand if this distance has any influence to ART initiation among HIV positive clients.

2.4.5 Availability and use of other health services.

Several studies have found that, the more people participated in seeking available recommended health services, the more likely they were to initiate, adhere and or to be retained in ART care when HIV positive. For example, studies in Tanzania (Watson, et al., 2012) and Kenya (Ferguson, et al., 2012) found that low antenatal care (ANC) attendance (i.e., less than three visits) was associated with lower rates of ART initiation and retention. Interestingly, women who were pregnant for the first time were more likely to register at an HIV clinic than women who had been pregnant before–the authors speculated this might be because women tended to be more anxious about their own and the fetus' health during their first pregnancy (Ferguson, et al., 2012). This study will therefore seek to find out if availability of other services in HTS outreaches determine ART initiation.

2.4.6 Health worker attitudes.

Most studies have reported that health workers' attitudes influences clients' initiation and adherence to ART. Studies in Brazil (Jerome, Galvao, and Lindau, 2011), Kenya (Ferguson, et al., 2012), Malawi (Kasenga, 2010) and South Africa (Varga and Brookes, 2008) found that negative health worker attitudes were barriers to ART initiation. In Uganda, negative provider attitudes were exemplified by health workers who reportedly were uninterested or too busy to interact with clients or provide them with medication (Duff, et al., 2010) and by health workers in Malawi who reportedly shouted at clients attending HIV services (O'Gorman, Nyirenda and Theobald, 2010).Other Studies in Kenya (Awiti, 2011) and Malawi (Chinkonde, Sundby, and Martinson, 2010) found that HIV positive clients concern that health workers would not maintain confidentiality also inhibited initiation, adherence or retention.Positive, non-judgmental attitudes from health workers – described in a Brazilian study as ''warmth'' – were found to be an enabler for ART initiation and adherence (ibid).

2.4.7 Test and treat policy

In 2015, the World Health Organization (WHO) recommended initiating lifelong antiretroviral therapy (ART) for all patients testing positive for HIV, regardless of CD4 cell count (WHO, 2015). Through a test and treat approach, if a person tests HIV-positive, he or she is immediately enrolled on HIV treatment. Before the advent of test and treat, people living with HIV had to wait for their CD4 count to drop to a particular level before starting ART. WHO cited three anticipated benefits from this "treat all" approach (also called "test and start" or "test and treat"): reduced morbidity among HIV-infected patients, reduced risk of transmission from HIV-infected individuals to their partners, and "increases in ART uptake and linkage to care. However, one of the challenges that was anticipated was that of initiating newly diagnosed individuals on ART as efficiently as

possible, while ensuring that patient autonomy, welfare, and retention on ART are not jeopardized by the initiation process.

A study in Zimbabwe (Rufu, et al., 2017) found that the 'Test and Treat' approach was feasible and successful in getting newly HIV-infected people initiated early on ART. Among 972 people newly diagnosed with HIV, 915 (94%) enrolled for HIV care and 771 (79%) were initiated on ART. Enrolment in care and initiation on ART on the same day as testing occurred in respectively 864 (89%) and 628 (65%) newly diagnosed patients. Over 80% of those who underwent HIV testing in maternal and child health departments initiated ART on the same day.

New data on test and treat in Uganda showed that this approach is having a significant impact on the number of people accessing HIV treatment. After Uganda adopting such approach, according to the government data, the number of men newly initiated into ART rose from 60,000 in 2016 to 80,000 in 2017, while the number of women newly initiated on treatment increased from 107,000 to 138,000 in the same period. Just as important, the treatment gap between people newly diagnosed as HIV- positive and people newly initiated on ART has shrunk for both men and women in Uganda. The gap for men narrowed by 45%, from 33,000 in 2016 to 18,000 in 2017, while for women it narrowed by 60% in the same period, from 48,000 to 19,000. Although more women are testing HIV positive than men, the HIV treatment gap is closing for both women and men. It's therefore evident that, the test and treat policy introduction has had a positive influence on ART initiation of HIV positive clients (MOH, 2016).

CHAPTER THREE

RESEARCH METHODOLOGY

3.0. Introduction

A methodology is a layout of the research procedure to be utilized while one is doing their research process. It comprised of the research philosophy, research design, area of the study, study population, sampling procedures, sample size, sampling techniques, data collection methods and instruments, quality control methods, data management and processing, data analysis, ethical considerations, and limitation of the study.

3.1. Research Philosophy

Choosing an appropriate research philosophy is an important part of methodology. In fact, as Guba and Lincoln (1982,) propounded, philosophical paradigm within a research holds utmost importance, as it is the *"basic belief system or world view that guides the investigation"* (p. 105). The term philosophy in research refers to the development of knowledge and the nature of that knowledge. Research philosophy is a particular way of developing knowledge that defines philosophical paradigm. This development and understanding of knowledge depends on certain assumptions based on our perspective of the world. It enables the researcher to decide which approach to adopt deriving from the research question (Holden and Lynch, 2004; Saunders, Lewis, and Thornhill, 2009).

This study employed Pragmatism philosophy. This is because pragmatism avoids going into arguments on concepts of truth and reality, and rather, it focuses on studying the issues of interest and value and uses both Qualitative and quantitative (mixed) methods. Other philosophies such as positivism (quantitative), Realism (qualitative) and interpretivism (qualitative), do not all use of the mix method study. Pragmatism recognizes that presenting only numbers cannot give the entire picture or the reality and real world practice oriented of the study. Therefore, qualitative design

helped to deepen our understanding of the reality by asking respondents ideas, opinions regarding ART initiation of HIV positive clients in outreaches.

3.2 Research Design

A cross sectional-analytical study was adopted. A cross sectional study refers to the research where data can be collected from different respondents at a single point in time (Kothari, 2013). By implication of this study, a convergent parallel mixed method design investigated and assessed the levels of initiation into ART of HIV positive clients and the factors affecting their initiation into ART during HTS outreaches in Wakiso district.

3.2.1 Rational for the choice of Research Design

A mixed research design represents research that involves collecting, analyzing, and interpreting quantitative and qualitative data in a single study or in a series of studies that investigate the same underlying phenomenon (Patricia, 2017). There is a need to gather more data to design policies and programs to increase enrollment/initiation into ART quantitatively, but also qualitatively to collect information to bring out clearly the reality experienced by the newly diagnosed HIV positive clients in the process of initiating ART services at the outreach centers in Wakiso district and opinions of health workers and stakeholders who closely work with PLHIV in Wakiso district.

In this study, using quantitative methods helped in generation of numerical data which was important for examining the size of the problem to allow the implementers of HIVAIDS programs, government of Uganda, policymakers and other None Government Organizations (NGOs) to use the results. This will help design public awareness programs that will increase initiation rates among newly diagnosed HIV positive clients. It also helped to find out the perception regarding ART qualitatively. The reason for choosing a cross-sectional design is because the study desires to collect data in a short period since it is academic research (BMJ, 2014).

3.3 Area of study

This study on the initiation of the HIV positive Clients in to ART at outreach centers was conducted in Wakiso district that is one of the highly populated district with different categories of people. Besides the high population, it is also bordered by other district that include Mukono, Kalangala, Mpigi, Luwero, Mityana and Nakaseke.

Wakiso district was selected because it has a high prevalence of HIV, at 10.6% (UPHIA, 2017) and with about 570 girls and young women aged 15 to 24 getting infected weekly (UAC, 2016) excluding other age brackets and male sex. With its central location and dense population of 2,007,700 as per 2014 population census, it's a home to all categories of people including the educated, the sexually active age groups, commercial sex workers, business people and many others with different sexual habits which accounts for the high HIV prevalence in the area. Further still, Wakiso district was selected because of high literacy levels for persons aged above 18 years that was reported to be at 90.5% among the 2,007,700 population (UBOS, 2017), majority of HIV positive clients would be expected to be knowledgeable about HIV/ART. Therefore, employing the above design and strategies would help to understand the problem in this area in its entirety. The study targeted the hot spots in the district, the urban councils, where these outreaches are conducted.

3.4. Study Population

It's important for a study to identify the particular population to engage during the study and according to Polit and Hungler (1999), population of a study refers to an aggregate or totality of all the objects, subjects, or members that conform to a set of specifications.

For this research, the study population were the HIV clients attending outreaches. When examining factors related to the initiation into ART, the respondents constituted all people who turned positive. These were purposively selected

3.4.1 Inclusion criteria

These are features of the targeted population that the researcher used to answer the research questions. The population that was allowed to participate in this study was the individuals who are above >18 years by the Ugandan law, since they are considered adult and gave their consent to participate the study and must have received HIV testing services at the outreach

3.4.2. Exclusion criteria

These are features of the potential study participants who meet the inclusion criteria but present with additional characteristics that can interfere with the success of the study or increase their risk for unfavorable outcome. For this study, study participants who were excluded were the HIV positive clients with a mental disorder diagnosed in the outreaches.

3.5. Sampling Procedure

According to the words of Orodho and Kombo, (2002), sampling procedure is the process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire group. As this study employed a mixed method study to understand the social ecological realities experienced by HIV positive clients diagnosed during ART initiation in outreaches, the study participants were sampled using non probability sampling technique. Non probability sampling is a technique that focuses on the fact that, not every element of the study population has the same opportunity for being considered in the sample (Burn and Grave, 2001). In this study Purposive sampling was used where all individuals who turned HIV positive were included in the sample apart from those below 18 years of age.

3.5.1 Quantitative sample size determination.

To determine the study population for quantitative data, Yamane's (1967:886) formula was used to select the target participants for the study out of the entire population in Wakiso district. According to this formula, Yamane (1967) provides:

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

Therefore: n=the sample size

N= the size of the population

e=error of the 5 percentage point/level of precision

n =? N=2,890,100, e=5(0.5)

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

$$n = \frac{2890,100}{1+2,890,100(0.05)2}$$

n = 2,890,100

2,890,101(0.05)

$$n = \frac{2,890,100}{2,890,101x0.1}$$

$$\mathbf{n = \frac{2,890,100}{2,89,10.1}}$$

n= 99.968 _~ n=100 plus 20% =120 (the 20% is for none response)

The purpose of selecting Yamane (1967:886) formula in determining the sample size for this study is that it assumes a 95% confidence level and 5% marginal error, meaning this ensured the reliability and validity of data collected under this study. From approximation of 2,890,100 estimate of the 2018 population in Wakiso district including the PLHIV and the stakeholders working with them, the study sampled **135** respondents for this study and these were sampled using the a non-probability technique.

3.5.2 Qualitative sampling procedure

3.5.2.1 Purposive Sampling

This study employed purposive sampling procedure that focused on selecting the study participants based on their relevance to the study and anticipated richness in information related to the study's research question (Yin, 2011: 265). Therefore, the researcher sampled participants according to their HIV status (only HIV positive clients).

3.6. Sample Size

A sample is defined as a set of people selected from the large population for the purpose of study (Webster, 1985). As a general rule of the thumb, it is necessary to use a larger sample than a smaller sample in order to produce accurate results (Harbor, 1998: pp.263-264). In this study, the researcher used the sample size from HIV positive clients. Therefore, this study sample 135 participants from the above sample category to participate in the study and these participants answered both quantitative and qualitative research questions to inform this study which were purposively selected from the individuals who turned HIV positive

3.7. Data Collection Methods

Data Collection is a process, through which the researcher collects information from all the relevant sources to find answers to the research problem, (Creswell, 2014). Though being a mixed method study, the researcher concentrated on collecting data for the purpose of answering the research problem but not testing the hypothesis, which is common with quantitative studies. Data was collected from participants who turned up for HTS in the outreaches. The researcher employed two methods of data collection, in-depth interview and observation using observation check list.

3.7.1. In-depth Interview

This is a data collection method used for eliciting narratives and it allows researchers to investigate people's views in greater depth (Kvale, 2003; Kumar, 2011). In the same way, Schostak (2006, pp.

54) opined that an interview is an extendable conversation between partners that aims at having in-depth information about a certain topic or subject, and through which a phenomenon could be interpreted in terms of the meanings interviewees bring to it. Cohen,et al (2007: 29) adds that interviewing is a valuable method for exploring construction and negotiation of meanings in a natural setting. In this study, the researcher used an in- depth interview to gather information from the HIV Clients as this minimizes stigma and fear compared to Focus Group Discussions (FGDs

3.7.2. Observation

Marshall and Rossman (1989) define observation as the systematic description of events, behaviors and artifacts in the social setting chosen for study. This study also adopted observation tool for data collection, and this involved observing the behavior of the HIV clients, their welfare, the nature of HTS provided to the clients, the condition under which these HTS services are given. Observation enabled the researcher to describe existing situations using the five senses, providing a written photograph of the situation under study (Erlandson, and Harris 1993). In this study, the researcher did not depend on the observation check list due to the uncertainties prevailing in the field during data collection process. But the researcher was able to observe the artifacts, nonverbal and other features necessary for the study and recorded them to avoid researcher's bias. However, this method can be tiresome, as participants can hide true behaviors but the researcher was critical and flexible to document these behaviors and triangulate this with information from other participants and data from secondary sources.

Table 3.1: Variables and Measurements

Variable	Operational Definition	Scale of measurement
Dependent Variable		
Level of ART initiation	Tested and Diagnosed at the outreach	Tested HIV positive? Dichotomous (Yes=1 and No=2) Initiated into ART? Dichotomous (Yes=1 and No=2)
Independent Variable		
Individual factors of initiation into ART	Age	Numerical continuous (whole number) and Categorical ordinal (15-19, 20-24, 25-29, 30-34, 35+)
	Sex	1-Female; 2-Male
	Marital status	Categorical ordinal (Single, Married, Cohabiting, Widowed)
	Religion	Categorical nominal (1=Anglican; 2=Catholic; 3=Moslem; 4=Pentecostal; 5=SDA; 99=other [specify]…..)
	Level of education	Categorical ordinal (1=None; 2=Primary; 3=Secondary; 4=College and University
	Health status	Sick at the time of test? Dichotomous (Yes=1 and No=2)
	HIV disclosure	Tested with Partner? Dichotomous (Yes=1 and No=2
	Disease severity	Severe at the time of test? Dichotomous (Yes=1 and No=2)
	Occupation of testing person	Categorical ordinal (Salaried; Self; Unemployed; Casual)
	Occupation of spouse if any	Categorical ordinal (Salaried; Self; Unemployed; Casual; Not applicable)
	Level of income	Categorical ordinal (High; Medium; Low)
Health facility/outreach factors	Distance to the outreach	Was the outreach reachable for you? Dichotomous (Yes=1 and NO=2
	Trust in health service delivery	Did you prefer to be given your test results at this outreach? Dichotomous (Yes=1 and No=2) Do you trust the test results given to you at this outreach? Dichotomous (Yes=1 and No=2)
	Health workers attitude and knowledge	Were the health workers friendly to you? Dichotomous (Yes=1 and No=2) Did the health worker(s) answer all the questions you asked? Dichotomous (Yes=1 and No=2)
	Turnaround time	How long did it take you to receive your test results? Categorical ordinal (less than 10mins; 10-20mins; 20-30mins; more than 30mins)
	Provision/availability of other services	Did you receive any other service you needed besides HTS? Dichotomous (Yes=1 and No=2)

Socio-cultural factors	Partner/spouse involvement	Did come/test with your partner/spouse? Dichotomous (Yes=1 and No=2)
	Family support	Will you disclose your HIV results to family member(s)? Dichotomous (Yes=1 and No=2) What kind of support will you need from your family? Categorical nominal (Financial; Physical psychological; None)
	Religious belief(s)	Does your religion support taking of ART? Dichotomous (Yes=1 and No=2)
	Traditional/cultural belief(s)	Does your culture support taking of ART? Dichotomous (Yes=1 and No=2)
	Community support	Are there existing community support groups for PLHIV in your community? Dichotomous (Yes=1 and No=2) Will you enroll into a community support group? Dichotomous (Yes=1 and No=2)
	Gender norms/taboos	Are there gender sensitive norms/taboos in your culture/community that are against ART? Dichotomous (Yes=1 and No=2)

3.8. Data management and processing

The researcher entered quantitative data into the Statistical Package for the Social Sciences (SPSS) software program. The reason for using SPSS is to code and analyze the data (Arkkelin, 2014). Data was double checked to ensure consistency with what was provided by the respondents. Afterwards data was transferred to STATA version 13 for Analysis and further interpretation

For qualitative data, the researcher used thematic analysis to come up with themes which were used at analysis

3.9. Data analysis

Data was analyzed using SPSS and STATA to make meaning out of it. The statistical test that was used to test the significance of variables was Chai square. Binary logistic regression helped the researcher identify if there were any relationships between the key variables of the study (Mukaka, 2012).

3.9.1 Qualitative data analysis

The qualitative data collected during interview and observations was analyzed using thematic analysis. Thematic analysis is a method for identifying, analyzing, organizing, describing, and reporting themes found within a data set (Braun. and Clarke, 2006).

3.9.2 Quantitative data analysis

The researcher used descriptive analysis and summary statistics to analyze closed-ended observational and survey data. The quantitative data was analyzed using SPSS and STATA, meaning the raw data were uploaded in the software and analysis was performed on the variables the study was interested in, especially the levels of ART initiation.

3.10. Validity and reliability

3.10.1. Validity

This is defined as how accurately the account represents participants' realities of the social phenomena and credibility (Schwandt, 1997). In this study, the researcher ensured validity by using tape recorder as a documentation tool where the voices of the study participants are recorded, transcribed, analyzed and interpreted to reflect the perceptions, feelings, opinions, experiences and understanding of the subject under investigation. Besides, the researcher ensured validity by triangulating both interviews and observation data. The purpose of this triangulation was to ensure trustworthiness of the information generated from the research participants.

3.10.2. Reliability:

This is the degree to which an assessment tool produces stable and consistent results (Colin, et al., 2006). To ensure reliability, the researcher kept constant check of the tape recorder as data

collection instrument by ensuring functionality of features such as stop, record, and pause among others and the tenure of the batteries.

Field and Morse (2010) recommend that researchers undergo extensive and rigorous training as interviewers and observers before undertaking qualitative studies. Therefore, the research assistants were trained in a manner that encouraged an objective view of the phenomena under study.

3.11 Interpretation of results

Once the analysis was done in both qualitative and quantitative methods, the findings from each component of the study was assessed for agreement (convergence, complimentarily or apparent contradictions (dissonance). The subjective perceptions of interview participants were compared with observational data to corroborate or contextualize observed phenomena and to highlight discrepancies between various stakeholder impressions and objective third-party observations.

3.12. Ethical considerations

Clearance and approval letter was obtained from the Uganda Martyrs University School of Postgraduate and research studies. A written consent form which contains information on the title, purpose, and objectives of the research and the rights of the participants. The research assistants were given the consent form to the participants and request them to read and for participants who cannot read, they would be helped to read for them.

The participants were requested to sign the form to consent once they agree to participate in the study. The study participants were treated with respect, and their information were kept confidential by maintaining high professional standard issues of confidentiality. The researcher informed the study participants that the research was to be published and the findings were not linked with individual respondents.

All surveys were anonymous, confidential and contained no participant identifiers like name and so on. Although demographic information was collected, it was collected in categories that are sufficiently broad to ensure individuals are not easily identifiable (eg, specific age was not be collected but rather age category). Completed surveys were kept in individually sealed envelopes to be opened and analyzed only at the conclusion of the data collection phase.

CHAPTER FOUR

PRESENTATION OF RESULTS

4.0 Introduction

This chapter gives the presentation of the findings consistent with the research objectives in chapter one. The chapter begins with the level of ART initiation in section 4.2, individual factors of initiation into art in section 4.3, health facility/outreach factors of initiation into art in section 4.4, social cultural factors of initiation into art in section 4.5,

4.0 (a) Demographic characteristics of respondents

Table 1 shows the profile of respondents. It shows that 59 (56.3%) while 59 (43.7%) of the respondents were Male. Majority of the respondents 50 (37.0%) were between 20-24 years of age, followed by those aged 25-29 years 32 (23.7%) as well as those aged 35years and above 29 (21.5%) and others were 18-19 14 (10.4%) with a least percentage of respondents in the age group of 30-34 years 10 (7.4%). Similarly, more than half of the respondents 71 (52.6%) were married, 32 (23.7%) were cohabiting, 26 (19.3%) were single and others were widowed 4 (3.0%) and divorced 2 (1.5%).

Almost half of the respondents were Catholics 65 (48.1%) in terms of religion, 30 (22.2%) Muslims, 17 (12.6%) Pentecostals, 14 (10.4%) Anglicans, 7 (5.2%) were SDA and 2 (1.5%) of the respondents belonged to other religions.

Lastly, 115 (85.2%) of the respondents had attended formal education with 51 (37.8%) accounting for Primary-Level, 53 (39.3%) Secondary level and 11 (8.1%) for University or college level, the remaining 20 (14.8%) had no formal education (None).

Table 1; Demographic characteristics of respondents

		Frequency	Percentage
Variables	Category		
Age of Client	18-19	14	10.4
	20-24	50	37.0
	25-29	32	23.7
	30-34	10	7.4
	35+	29	21.5
Sex of respondent	Female	76	56.3
	Male	59	43.7
Marital status of client	Single	26	19.3
	Married	71	52.6
	Cohabiting	32	23.7
	Widowed	4	3.0
	Divorced	2	1.5
Religion of client	Anglican	14	10.4
	Catholic	65	48.1
	Moslem	30	22.2
	Pentecostal	17	12.6
	SDA	7	5.2
	other, specify	2	1.5
Level of Education	None	20	14.8
	Primary	51	37.8
	Secondary	53	39.3
	College/university	11	8.1

Source: Field data

4.1 Level of ART initiation

Table 2 shows the levels of ART initiations. 124 (91.9%) of the respondents in the study were initiated into ART and only 11 (8.1%) were not initiated into ART.

Table 2; Level of ART initiation

	Female (frequency)	Percent	Male (Frequency)	Percent	Total	Percent
No	5	6.6	6	10.2	11	8.1
Yes	71	93.4	53	89.8	124	91.9
Total	76	100.0	59	100.0	135	100.0

Source; Primary data

4.1 Individual Factors influencing Initiation into ART

4.2 (a) bivariate analysis for Individual factors influencing initiation into ART

Table 3, shows that more than half of the respondents 65 (52.6%) were not feeling well/sick before testing HIV positive while 59 (47.4%) were healthy even though they were diagnosed HIV positive.

In addition, 7 in 10 of the respondents did not test with their partners because of: Fear of being left by their partner in case of being found positive, did not want to disclose their status to the partner, where not staying together, Partner was not interested in knowing their HIV status, others wanted to avoid domestic violence, Partner had already tested, testing was abrupt, while others did not have a permanent partner at the moment, with others partners being sick and only 3 in 10 tested with their partners because: they wanted to know each other's status, Routine couple testing, following antenatal guidelines, wanted to avoid domestic violence and others it was partners request

Furthermore, more than half of the respondents were told that (HIV/AIDS) had become severe in their bodies 77 (62.1%) while 47 (37.9%) had not become severe. 42 (34.1%) of the respondents were self-employed, 26 (21.1%) unemployed, 9 (7.3%) were petty/casual laborers and 27 (22.0%)

were salary earners, and most of the respondents 65 (55.3%) their income levels were less than (<500,000), 54 (43.9%) were earning medium income (500,000<1,000,000) with a least number earning above 1,000,000 1 (0.8%).

Table 3; Bivariate analysis for Individual factors influencing initiation into ART

		Level on initiation			
Independent variable	**Category**	**Yes**		**No**	
		Frequency	**%**	**Frequency**	**%**
Age of Client	18-19*	12	9.7	2	18.2
	20-24	47	37.9	3	27.3
	25-29	30	24.2	2	18.2
	30-34	9	7.3	1	9.1
	35+	26	21	3	27.3
Sex of respondent	Female**	71	57.3	5	45.5
	Male	53	42.7	6	54.5
Marital status of client	Single**	22	17.7	4	36.4
	Married	65	52.4	6	54.5
	Cohabiting	32	25.8	0	0
	Widowed	3	2.4	1	9.1
	Divorced	2	1.6	0	0
Religion of client	Anglican**	12	9.7	2	18.2
	Catholic	60	48.4	5	45.5
	Moslem	28	22.6	2	18.2
	Pentecostal	16	12.9	1	9.1
	SDA	6	4.8	1	9.1
Level of Education	other, specify*	2	1.6	0	0
	Primary	43	34.7	8	72.7
	Secondary	51	41.1	2	18.2
	College/university	11	8.9	0	0
Health status	Not feeling** well/sick	65	52.4	6	54.5
	Feeling well/Healthy	59	47.6	5	45.5
Testing with Partner	No**	85	68.5	10	90.9
	Yes	39	31.5	1	9.1
Severe-ness of the disease	No**	47	37.9	7	63.6
	Yes	77	62.1	4	36.4
Occupation	Salaried**	27	22	1	9.1
	Self employed	42	34.1	5	45.5
	Unemployed	26	21.1	1	9.1
	Petty/casual	9	7.3	0	0
	N/A	19	15.4	4	36.4
Level of income	High (1000000+)**	1	0.8	0	0
	Medium (<1000,000)	54	43.9	5	45.5
	Low (<500000)	65	55.3	6	54.5

4.2 (b) Multivariate analysis for Individuals factors influencing initiation into ART

Table 4, explains the statistical relationship between individual factors and ART initiation

Dependent Variable=ART initiation. Some of the variables within a category were dropped at analysis level since they were communicating the same information to a factor variable. In statistic this is referred to as a **dummy variable trap** under logistic regression

Individual factors were not significant at 95% confidence interval, meaning individual factors were not affecting ART initiation directly with a p-value of 0.2975

Gender did also not affect ART initiation with a p-value of 0.571. However, more than 50% of the male were less likely to be initiated on ART than Females.

The 95% confidence interval for the odds ratio comparing Males versus Females who initiated on Art was (0.3980- 5.9181). While the odds ratio was not statistically significant, the confidence interval suggests that the magnitude of the effect could be anywhere from a 0.398-fold increase to a 5.9181-fold increase. A larger sample size was needed to generate a more precise estimate of effect.

Similarly, Age Categories did not affect enrollment into ART with p-values of 0.118, 0.087, 0.362, and 0.324 for age categories of 20-24, 25-29, 30-34, and 35+ respectively.

Religion with all its categories did not affect ART initiation since all the p-value within the categories were above 0.05 and similarly education categories did not affect ART initiation

Furthermore, currently being sick does not affect art initiation (P=0.765). However, those who were feeling well where 8% more likely to be initiated on ART than those not feeling well. Testing with a partner did also not affect ART initiation (p=0.357), also severe-ness of the disease did affect ART initiation (p=0.118), occupation of the client and spouse did also not affect ART

initiation and similarly the current level of income did also not affect ART initiation

Table 4; Multivariate analysis for Individuals factors influencing initiation into ART

		Crude Values			Adjusted values		
Independent variable	Category	Odds ratio	P-Value	CI	Odds ratio	P-Value	CI
Age of Client	15-19*	1			1		
	20-24	2.611	0.322	0.391-17.426	50.913	0.118	.3686-7031.332
	25-29	2.500	0.386	0.315-19.8347	69.696	0.087	.5416- 8969.434
	30-34	1.500	0.755	0.117-19.236	13.551	0.362	.0499-3682.187
	35+	1.444	0.707	0.2127-9.808	8.101	0.324	.1265-518.6076
Sex of respondent	Female**	1			1		
	Male	0.622	0.453	.1802 -2.1475	0.485	0.571	03980- 5.9181
Marital status of client	Single**	1			1		
	Married	1.970	0.327	0.508-7.631	1.4	0.794	.1137- 17.1743
	Widowed	0.545	0.635	0.045-6.654	9.668	0.516	.0103- 9039.594
Religion of client	Anglican**	1			1		
	Catholic	2.000	0.438	0.347-11.544	19.55	0.252	.1206- 3168.726
	Moslem	2.333	0.423	0.293-18.553	26.664	0.235	.1187- 5990.158
	Pentecostal	2.667	0.445	0.216-32.96	8.652	0.415	.0484- 1547.704
Level of Education	other, specify*	1			1		
	Primary	0.283	0.249	0.033-2.423	0.408	0.582	.01685- 9.8848
	Secondary	1.342	0.814	0.115-15.671	3.943	0.518	.0612- 253.8484
Health status	Not feeling** well/sick	1			1		
	Feeling well/Healthy	1.089	0.892	0.316-3.757	0.704	0.765	.0701- 7.0624
Testing with Partner	No**	1			1		
	Yes	4.588	0.153	0.567-37.11	5.51	0.357	.1459- 208.009
Severe-ness of the disease	No**	1			1		
	Yes	2.867	0.107	0.796-10.32	7.334	0.118	.6039- 89.0773
Occupation	Salaried**	1			1		
	Self employed	0.315	0.289	0.037-2.66	0.0194	0.19	.0001 -7.0829
	Petty/casual	0.326	0.377	0.027-3.92	0.12	0.478	.0003-42.2333
Level of income	High (1000000+)**	1			1		
	Medium (<1000,000)	0.953	0.939	0.276-3.29	0.435	0.461	.04748- 3.9815
Base/reference category**, Lr chi2=21.74,P-value=0.2975,							

4.3 Health Facility/Outreach Factors influencing Initiation into ART

4.3 (a) Bivariate analysis for Health Facility/Outreach Factors influencing Initiation into ART

Table 5, shows that 120 (88.9%) of the respondents agreed that the outreach was reachable, while 15 (11.1%) did not agree that it was reachable.

More so, 97 (71.9%) preferred to get HTS from this outreach because: It was near to their home, People were not many/over congestion in hospitals, it had professionals, it was free of charge and were caring, some were just passing by, they were influenced by peers to know the status and other because it was mandatory for prisoners to be HIV tested, while 38 (28.1%) did not prefer to take HTS from this outreach because it lacked privacy and others had stigma.

Almost every respondent 123 (91.0%) trusted the results he was given with a few of them being unsure of the results 12 (9.0%). Those who trusted the results was because: The Health workers were professionals in what they are doing, had self-suspicion (Having multiple partners, feeling sickly, death of partner), had already received the same result from another facility, had un protected sex while others results matched with those of partner.

Furthermore, most Health workers were friendly in the various outreaches the respondents 127 (94.8%) visited while 7 (5.2%) said that health workers were not friendly, 120 (81.5%) of the respondents were satisfied with the answers that the health workers provided with 7 (16.3%) not being satisfied with the answers given by the health workers.

On Average most respondents spent more than 30 minutes at the site 54 (40.3%), followed by those who spent 20-30 minutes 32 (24.6%), then 10-20 minutes 25 (19.4%) with least spending less than 10 Minutes 21 (15.7%)

In addition, 85 (64.4%) received other services other services apart from HTS while 47 (35.6%) did not receive any other service apart from HTS. Of those who received others services, the services included: STI management, RTI management, Family planning services, Cervical cancer screening, antenatal services, Safe male circumcision, Malaria test and treatment, art service, Consultation, PID treatment and others got condoms

Table 5; Bivariate analysis Health facility/outreach factors influencing initiation into ART

		Client initiated into ART			
Variable	**Category**	**No**		**Yes**	
		Frequency	**%**	**Frequency**	**%**
Reachability (<5Kms)	No	1	9.1	14	11.3
	Yes	10	90.9	110	88.7
HTS preference	No	5	45.5	33	26.6
	Yes	6	54.5	91	73.4
Results trust	No	2	18.2	10	8.1
	Yes	9	81.8	113	91.9
Friendly-ness of health workers	No	1	9.1	6	4.9
	Yes	10	90.9	117	95.1
Satisfaction	No	4	36.4	18	14.5
	Yes	7	63.6	103	83.1
Time spent (in mins)	<10	2	18.2	19	15.4
	10-20	3	27.3	23	18.7
	20-30	5	45.5	28	22.8
	30+	1	9.1	53	43.1
Other services offered	No	5	45.5	42	34.7
	Yes	6	54.5	79	65.3

4.3 (b) Multivariate analysis for Health Facility/Outreach Factors influencing Initiation into ART

Table 6, explains the Statistical significance of all Health facility/outreach factors. It further conforms to the earlier objective which was also not significant at influencing ART initiation with a p-value=0.1673,

The reachability of the outreach was not significant at affecting ART initiation 95% confidence interval, meaning that whether the outreach was far or not it did not affect ART initiation with a p-value=0.571. However, 50% of those within a 5 km radius were less likely to be initiated on ART than those beyond the 5km radius in terms of distance from the outreach with 95%Confidence interval ranging between (0.04357-5.6231)

Prefer-ability to test from the outreach was also not significant at 95% confidence interval, whether people preferred to test from the outreach or not still did affect ART initiation with a p-value =0.543

Trusting of the results given by the outreach still did not affect ART initiation with a p-value=0.448, However, those who trusted the results were 2 times more likely to be initiated on ART than those who did not trust the results. Much as it was not statistically significant at 95% confidence interval

Whether health workers were friendly or not did not affect ART initiation with a p-value=0.63

The time spent at the outreach did not also affect ART initiation with all p-value above 0.05 at 95% confidence interval

Satisfaction with the service provided by health worker/facility did not also affect the dependent variable (ART initiation) meaning it was not significant at 95% confidence interval (P-Value=0.201)

Receiving of other services that the client intended or not did contribute rejecting of ART initiation among the respondents in the sample selected with a P-value=0.97

Table 6; Multivariate analysis on Health facility/outreach factors influencing initiation into ART

		Crude Values			Adjusted Values		
Variable	Category	Odds ratio	P-value	CI	Odds ratio	P-value	CI
Reachability (<5Kms)	No** Yes	1 0.786	0.824	0.093-6.6	1 0.495	0.571	0.04357-5.6231
HTS preference	No** Yes	1 2.298	0.193	0.657-8.04	1 1.64761	0.543	0.323-8.2332
Results trust	No** Yes	1 2.511	0.278	0.476-13.247	1 2.10741	0.448	0.3076-14.438
Friendly-ness of health workers	No** Yes	1 1.95	0.554	0.213-17.83	1 2.16022	0.63	0.0937-49.811
Satisfaction	No** Yes	1 3.270	0.08	0.868-12.32	1 3.0551	0.201	0.5518-16.914
Time spent	<10** 10-20' 20-30 30+	1 0.807 0.589 5.579	0.824 0.552 0.17	0.122-5.34 0.103-3.36 0.478-65.1	1 0.47785 0.61316 7.54415	0.482 0.612 0.168	0.0609-3.75 0.0925-4.0657 0.4262-133.55
Other services offered	No** Yes	1 1.567	0.479	0.452-5.44	1 1.03043	0.97	0.216-4.9155

Base/Reference category**, LR Chi-Square=11.65, p-value 0.1673

4.4 Social Cultural Factors influencing Initiation into ART

4.4 (a) Bivariate analysis for Social Cultural Factors influencing Initiation into ART

Table 7 below explains, 81 (60.4%) of the respondents would disclose their HIV test results to their family member(s) because: they could get support from them, wanted to be reminded on the time to take drugs, wanted to create awareness in the family and prevent the spread, some family members were also HIV positive, and others Couldn't hide anything from their loved ones including their status. While 53 (39.6%) would not disclose to their family members because of the following reasons: Fear of being stigmatized, did not want to know, had fear to start ART, some members are not faithful, did not trust anyone and others had fears of breaking up with their partner

Almost 101 (87.8%) of the respondents agreed that their religion supports ART for HIV positive persons with financial/economic/spiritual support, Sensitization on HIV testing, Encouraging

people to adhere well on their drugs so that they can live a longer and better life. While 14 (12.2%) were not in agreement that religion supports HIV positives

Similarly, 78 (79.6%) of the respondents agreed that their culture supports ART for HIV positive persons with only 20 (20.4%) not in agreement, of those who agreed that cultural support exists was through; Encouraging HIV positive people to get and take ART, Providing economic support to HIV positive people, sensitizing cultural members about HIV/ART and cultural believes/taboos, discouraging members with HIV from using herbal medicine instead of ART, by welcoming door to door testing services, forming communal support groups for HIV positives and encouraging everyone to know their HIV status and stay safe.

In addition, 43 (30.0%) were aware of existence of Community support group for PLHIV while 84 (70.0%) of the respondents were not aware of any existing PLHIV community support group

More than half of the respondents would not enroll 78 (64.5%) because: they had fear of being stigmatized from other community members, needed privacy, while others did not know of any PLHIV support group and had better things to do while 36 (35.5%) would enroll in the support group for PLHIV in their communities because; they wanted to get assistance from people of the same status, it reduces discrimination when you are many on ART, they wanted mobilize other people into care, they wanted share the HIV positive experience with other people of the same status and reduce stigma, seek for financial and psychosocial support and others wanted to feel loved and accepted by the people of the same status.

Furthermore, 88 (80%) said that there are no gender sensitive norms/taboos that affect ART for PLHIV in the community while 22 (19.1%) that these taboos exist in their communities and these included; Men who get HIV are said to be having extra marital affairs and wanting unprotected sex and women are believed to bring HIV to men through cheating

Table 7; Bivariate analysis on Social-Cultural factors influencing initiation into ART

		Client initiated into ART			
Independent Variable	**Category**	**No**		**Yes**	
		Frequency	**%**	**Frequency**	**%**
Disclosure to family	No**	7	63.6	46	37.4
	Yes	4	36.4	77	62.6
culture support	No**	1	25	19	20.2
	Yes	3	75	75	79.8
Religion support	No**	1	20	13	11.8
	Yes	4	80	97	88.2
community support group	No**	5	55.6	79	71.2
	Yes	4	44.4	32	28.8
Enroll for community support group	No**	8	88.9	70	62.5
	Yes	1	11.1	42	37.5
Norms/taboos	No	8	100	80	78.4
	Yes	0	0	22	21.6
Financial support	No	0	0	1	1.7
	Yes	4	100	59	98.3
Physical support	Yes	1	100	29	100
	No	0		0	
Psychological support	Yes	1	100	51	100
	No	0	0	0	0

4.4 (b) Multivariate analysis for Social Cultural Factors influencing Initiation into ART

Table 5 explains, that at 95% confidence interval, all social cultural factors were not statistically significant at affecting the dependent variable (ART initiation) with a p-value of 0.6906

Whether the client would disclose his/her HIV status to the family member(s) or not did not significantly affect ART initiation with a p-value=0.379 and odds ratio of 0.348 However, those who disclosed to their family where 70% less likely to be initiated on ART than those who did not disclose to their family members with CI between 0.033 to 3.6539

Religion support to HIV positive clients did not also affect ART initiation, meaning that whether there is religion support or not almost all client would initiate ART with a p-value=0.462

Culture support for HIV positive persons did not also affect ART initiation, in other words it was not significant at 95% with a p-value=0.306 with adjusted odds ratio of 4.208. However, those who those who were in favor of cultural support where 4 times more likely to be initiated on ART than those not in favor.

Existence of community support group for PLHIV did not also affect ART initiation with a p-value=0.306.

Enrollment in the community support was also not statistically significant at 95% confidence interval, meaning that it did not affect ART initiation with a p-value =0.546. However, those who would enroll for community support where 80% more likely to be initiated on ART than those who could not enroll for community support group

Table 8; Multivariate analysis on Social-Cultural factors influencing initiation into ART

		Crude Values			Adjusted Values		
Independent Variable	Category	Odds Ratio	P-value	CI	Odds ratio	P-value	CI
Disclosure to family	No**	1			1		
	Yes	2.929	0.1	0.813-10.55	0.348	0.379	0.033-3.6539
culture support	No**	1			1		
	Yes	1.316	0.817	0.13-13.37	4.208	0.306	0.269-65.839
Religion support	No**	1			1		
	Yes	1.865	0.59	0.19-17.99	2.475	0.462	0.2209-27.7413
community support group	No**	1			1		
	Yes	0.506	0.333	0.128-2.00	0.439	0.546	0.030-6.356
Enroll for community support group	No**	1			1		
	Yes	4.8	0.146	0.580-39.74	1.820	0.656	0.131-25.377
Base/reference category**, LR Chi-Square=1.46, p-value 0.6906							

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter provides a summary of initiation into antiretroviral therapy of HIV positive clients at HIV testing service outreaches in Wakiso district, discussion of findings, conclusion, recommendations and areas for further research. The chapter is also presented in line with the study objectives.

5.2 Summary of the findings

5.2.1 Level of ART initiation

The study found out that 91.9% of the positive persons were initiated on ART, while 8.1% were not initiated on ART immediately after testing HIV positive.

5.2.2 Individual factors into ART initiation

All the individual factors were not statistically significant at 95% confidence interval at influencing the dependent variable (ART initiation) with a p-value of 0.2975, meaning individual factors did not affect some one's decision to start ART

5.2.3 Health facility factors into ART initiation

Health facility factors didn't affect ART initiation since the p-value=0.1673 was greater than 0.05, in other words by use of binary logistic regression/Multivariate analysis all the Health facility were not statistically significant at influencing the dependent variable

5.2.4 Social-Cultural factors into ART initiation

Social-Cultural factors were not statistically significant at 95% confidence interval at influencing the dependent variable (ART initiation) with p-value of 0.6906, implying that social-cultural factors do not affect some one's decision to start ART

5.3 Discussion of findings

5.3.1 Level of ART initiation of positive clients

Objective one sought to determine the level of initiation of HIV positive clients into ART during the HTS outreaches in Wakiso district. The results of the study revealed that most (91.9%) positive clients were being initiated on ART apart from a few clients who were not being initiated (8.1%) which was also in line with district non-initiation status of 8% for the period of April-June 2019. The study finding are in line with UNAIDS (2017), which said that there has been a gradual increase in number of people living with HIV/AIDs accessing ART. The findings are also in line with (Simmelink, 2014) which said that there was a dramatic improvement in linkage to care after HIV diagnosis in outreaches as compared to recent past in Tanzania. These findings are also in line with Rufu, et al. (2017) which was carried out in Zimbabwe and found out that 'Test and Treat" approach was feasible and successful in getting newly HIV-infected people initiated early on ART. The study finding were also in line with MOH (2017) which revealed that was in increase in ART initiation from 60,000 in 2016 to 80,000 in 2017.

5.3.2 Individual factors in relation to ART initiation

The study revealed that individual factors did not affect ART initiation, meaning that irrespective of any of the independent variable listed, there was no significant impact on the dependent variable

Furthermore, the study revealed that age was not significant at affecting ART initiation. These

finding were not in line with Hodgson, et al. (2014) which had indicated that age was associated with ART initiation

This study also revealed that a high percentage of those less than 25 years were not initiated as compared to other age groups. These findings are in line with Cohn, et al., (2008) and Kirsten, et al., (2011), in their studies in Tanzania and USA respectively in which they found out that young women and Men are less willing to enroll into ART compared to older age bracket

Most respondents had attended above Primary level, with those between primary to secondary highly failing to initiate ART. However, Education was not significant at affecting the dependent variable. The findings were not in line with Ayuo, et al. (2013) which had found that each additional year in school increases the likelihood of ART initiation and adherence by 10.6%.

Overall more Females were interviewed as compared to Males in the study, while more Male did not initiate ART.

Also to note, is that more Married respondents were interviewed among all the categories followed by those who were cohabiting, People who failed to initiate ART were mainly the married men and those who were single. It was also important to note that much as we had more respondents under cohabiting, no refused to initiate ART.

Most respondents were Catholics by religion, followed by Muslims and others, and still more Catholics did not initiate ART

More than half of the respondents were not feeling well/sick, and higher percentage of those who sick still did not initiate as compared to those who were healthy.

Most respondents did not test with their partners and of those who did not test with their partners

mentioned challenges that included: Fear of being left by their partners in case of being found positive, Did not want to disclose their status to the partner, they do not stay together, Partner not interested in knowing their HIV status, to avoid domestic violence, Partner was already tested, did not have partner at the moment, partner was sick, everyone minds their own business, death of the partner and testing was abrupt. However, of those tested with their partners they wanted to know each other's status, Routine couple testing, following antenatal guide (MOH guidelines) 2018, also wanted to avoid domestic violence and also it was a partner's request.

Almost all the respondent's diseases had become severe in their bodies. However, most of those whose disease had not become severe did not initiate ART

Occupation had no significant effect on ART initiation, though more rates of HIV were among the self-employed, Salaried and the unemployed, with more non initiation rates among self employed

Almost all the respondents were earning below one million with a high percentage in mainly those who earning <500,000. However, the less the income the more the non-initiation meaning that those were earning were on high risk of not accepting ART

5.3.3 Health facility factors influencing initiation into ART among HIV positive clients

The health facility factors did not affect ART initiation, meaning all the factors were not significant at affecting the dependent variable. The Health factors that did not affect ART initiation included; Reachability of the outreach within a 5km radius, prefer-ability to get HTS from the outreach, trust for the results, satisfaction with the answers given, time spent at the outreach, other services which were received.

Most of the respondents were within 5km radius from the point where the outreach was

conducted, with a fewer number of those not within 5 km radius not initiating ART. Almost no one did not initiate ART among those coming from very far. This study was not in line with Duff, p.et al. (2010) carried out in Uganda which showed that difficulty in obtaining or paying for transport to facilities was a barrier to ART initiation, the study was still not in with a study carried out in Tanzania by Wason, et al., (2012)

More than half of the respondents preferred to get HTS from the designated outreaches, with almost a similar number of non-initiation for those who preferred to get HTS from the outreach and those who did not prefer. Of those who preferred to get the outreach these were their reasons; It was near to my home, People were not many and outreach had professionals, It was free of charge, caring, was just passing by, convenience, Was influenced by peers to know the status., It was mandatory for prisoners to be HIV tested, and Hospital has Congestion

While those did not prefer to test from these outreaches, their reasons included: stigma, lack of privacy in the outreach and others never wanted to test

Almost every respondent trusted the results given to him/her. However, a more percentage of those who trusted the results did not initiate ART as compared to those who didn't trust the results

For those who trusted the results, these were their reasons: The health were professionals in whatever they were doing, good service, Self-suspicion (Having multiple partners, feeling sickly, death of partner), retesting, fear to test, had already received the same result from another facility, had un protected sex, and others results matched with those of partner.

Furthermore, more respondents were satisfied with answers shared by the health workers, however among those who did not initiate. More of those who were satisfied did not initiate ART

The study revealed that most health workers were friendly to the clients thus more clients initiated

on ART. This study was in line with a study in brazil by Jerome, Galvao, and lindau, (2011), which found that negative health worker attitude where barriers to ART initiation. The study was also in line with Duff, et al. (2010) which was carried in Uganda and revealed that negative provider attitudes were exemplified by health workers who reportedly were uninterested or too busy to interact with clients or provide them with medication leading to low levels of Art initiation

Almost all respondents spent less than 30 minutes at the outreach and more of these that spent less time did not initiate ART among the non-initiated proportion

More than half of the respondents received other services they wanted apart from HTS. However, among the non-initiated those who said had slightly a higher number of those who did not initiate. The other services received included: STI management, RTI management, Family planning services, cervical cancer screening, antenatal services, Safe male circumcision, Malaria test and treatment, Consultation. PID treatment, and others got condoms

5.3.4 Social –cultural factors influencing ART initiation in Wakiso district

Social –cultural factors were also not significant at influencing the dependent variable. Meaning irrespective the social culture factors listed in the study someone's one decision to initiate ART would not be affected

Almost more than half of the respondents would disclose their HIV status to the family members in indulgence of: getting support from them, to be reminded on the time to take drugs, to create awareness in the family and prevent the spread, some are also HIV positive, Confidentiality, some couldn't hide anything from their loved ones including their status. These findings were in line with Ujiji. et al. (2011) which had found out that family members can influence initiation. The study further found out that family members citied as important facilitating or inhibiting

influencers to ART initiation

However, some who feared to disclose to their family members was because; Fear of being stigmatized, didn't want to know and fear to start ART, some members were not faithful, did not trust anyone and fear to breakup with the partner

Similarly, more respondents said that religion and culture support for is provided to HIV positive persons through; providing financial/economic support, Sensitization on HIV testing, Encouraging people to adhere well on their drugs so that they can live a longer and better life, providing counselling and spiritual support and Discouraging members with HIV from using herbal medicine instead of ART. However religion was not significantly affecting ART initiation. These findings were not in line Nassali, et al (2009) that had found out that being Christian was a found to influence initiation, adherence and retention into ART/care. This study was also in disagreement with Rena, et al, (2016) which reported that, some participants noted they perceived opposition from some members of their community to widespread ART use, the participants had noted that because community members want an easy way of identifying who amongst them is HIV-positive, that they often don't want infected persons initiating ART because they now appear healthier or normal

Unlike, other variables here most respondents said that community PLHIV support groups do not exist in these communities, with almost an equal number of the non-initiated

Similarly, less clients would enroll in these community support group because; Fear of stigmatization from other community members, need for privacy, did not know of any PLHIV support group and others had better things to do. While for those who would considered such reasons: To get assistance in case of need for any, it reduces discrimination when you are many

who are in ART, to be able to mobilize other people into care, to share the HIV positive experience with other people of the same status and reduce stigma, for financial and psychosocial support. to feel love and to be accepted by the people of the same status.

Most respondents agreed that there are no gender sensitive taboos/ norms in the community that affect ART initiation for PLHIV and all the clients that did not initiate ART they also said that no gender taboos/norms that would have prevented them from taking ART. However, few of them were listed including; Men who get HIV are said to be having extra marital affairs and wanting unprotected sex and women are believed to bring HIV to men through cheating

Various ways put by respondents on how clients can be helped to initiate ART and these included ; Provision of continuous counselling services after testing positive to reduce stigma, encouraging couples to test and counselling them together, by carrying out more community sensitization about ART by being more friendly and nonjudgmental, by providing social and financial support, more sensitization about the importance of ART for the people living with HIV, they should not be made to wait for so long and improving of privacy by Health workers. The study was in line with Bohmer and Kirumira,(1997) which was carried out in Mpigi district that revealed that more males and females were initiated on ART but where concerned about confidentiality, the testing process, accuracy of results and cost of VCT. The study had similar findings with UNAIDS, (2002) which was carried out in Zambia and found that privacy and service quality were also important youth and they stressed a need for privacy

5.4 Conclusion

The aim of this study was to examine the factors influencing ART initiation among the HIV positive clients in Wakiso district.

The study adopted cross sectional analytical design in combination with quantitative and qualitative research approach to achieve the four study objectives.

The study adopted purposive sampling method to select the respondents for the study. Specifically, the focus was on initiation into ART. A total of 135 clients participated in the study. The study utilized Binary Logistic regression analysis as the main model, Cross tabulation and descriptive statistics were used to address the objectives of the study as well as use of thematic analysis to address the qualitative questions

The first objective examined the level of ART initiation among HIV positive. The result showed that majority (91.9%) of the clients were initiated on ART.

The second objective probed to examine the individual factors influencing ART initiation. With respect to objective two, the findings indicated that all factors were not significant at affecting the ART initiation using binary logistic regression, the factors included age, sex of respondents, marital status, religion and level of education

Objective three wanted to examine the social-cultural factors influencing initiation into ART in HIV positive clients in HTS outreaches in Wakiso district. All social-cultural factors were also not significant at affecting ART initiation and these included: disclose to family members, Cultural support, religion support, existence of community support groups, enrollment in PLHIV groups, and others

The fourth objective was to investigate health facility factors influencing ART initiation in HIV

positive clients. All the factors that were listed were not significant at affecting the dependent variable, the factors included: reachability of the outreach, prefer-ability to get HTS from the outreach, satisfaction with the answers, time spent at the outreach, other services received apart from HTS.

5.5 Recommendations of the study

Based on the study's findings, the following recommendations are made on initiation in to antiretroviral therapy of HIV positive clients at HIV testing service outreaches in Wakiso district in the study context.

5.5.1 Level of ART initiation of HIV positive clients

The Ministry of Health and other relevant authorities should engage the non-initiated only to find out other hidden reasons for not initiation ART on the same day

5.5.2 Individual factor to ART initiation

To find out why more people who turn positive were already not feeling well/sick

To encourage clients to test with their partners since the study revealed that less clients test with their partners so that they can know each other's status, for routine couple counselling and antenatal guidelines (MOH guidelines, 2018)

To always encourage people to test as early as possible whenever they suspect a contact with an HIV/AIDS infected person

To always ensure that clients seek for PEP services whenever unprotected sexual intercourses occur

Ministry of Health and other health facilities should prepare/organize sensitization on

HIV/awareness at least once per quarter in all areas in Uganda.

HIV/AIDs guidelines should be re-emphasized to all people in the District

5.5.3 Social-cultural factors to ART initiation in HIV positive clients

Health workers should always persuade the clients to share the status of their results with their family members by revealing the importance of disclosure to the family members

Culture and Religion should support PLHIV by providing financial/economic support, Sensitization on HIV testing, Encouraging people to adhere well on their drugs so that they can live a longer and better life, providing counseling and spiritual support and Discouraging members with HIV from using herbal medicine instead of ART

The government should strengthen use of Community groups for PLHIV and ensure that they are known to everyone in the community

Health workers should also alert clients before testing on the availability of community support groups and how they can support them in case they turn positive.

Ministry of Health and health service providers should clear all the myths about ART initiation that may prevent clients from taking ART service around the communities in Wakiso

Family members of HIV positive individuals should always ensure that their colleges receive Physical, psychological, financial, acceptance and love, spiritual support and to constantly remind them on time of taking their medicines

5.5.4 Healthy facility factors to ART initiation in HIV positive clients

Outreaches should be brought nearer to people, at least within 5Km radius since most clients appreciated that outreaches were very near to them hence an added advantage for testing

Health workers should maintain the friendliness to the clients in order to ease ART initiation for HIV positive client

Health workers should ensure that at most clients spend less than 30 minutes while receiving the service since most people tend to be busy.

Health workers should always ensure that HTS is provided along with other services like STI management, RTI management, Family planning services, Cervical cancer screening, Antenatal services, Safe male circumcision, Malaria test and treatment, art service, Consultation, PID treatment. And giving out condoms to get more people testing for HIV hence raising the yield

5.6 Contributions of the study

The findings of this study could be useful in various ways:

1. Serve as a baseline for other research users who may venture into similar area "**initiation into art of HIV positive clients at HIV testing service outreaches in Wakiso district**".
2. Provide resource information to academicians, policy makers, and researchers for better policies and could influence service delivery in the health sector in countries with similar settings.
3. Identified gaps may be used by the MOH to strengthen and bridge loop holes in ART initiation.
4. Contributed to the fulfillment to the requirements for the award of a Master's degree in Public Health at UMU to the Researcher.

5.7 Areas for further research

Arising out of this study, the following areas are suggested for further research:

- Since all the objectives were not significant at influencing the dependent variable. There is need to carry out study to identify more variables that may hinder ART initiation
- Further research should be carried out for those between 20-24 years, to identify why this age bracket had very many positives in the study
- A study to identify why more married client are getting infected as compared to other marital categories

REFERENCES

Akullian, A. N., Mukose, A., Levine, G. A., and Babigumira, J. B., 2016. People living with HIV travel further to access healthcare: a population-based geographic analysis from rural Uganda. Kampala: *J Int AIDS Soc*.

Andrew, D. K. 2017. Test and Treat in Uganda: Perspectives from An Implementing/Academic Partner. IDI. Kampala, Uganda. *Med FRCP*.

Awiti, U. O. et al. 2011. Keeping healthy in the backseat': How motherhood interrupted HIV treatment in recently delivered women in Kenya. *African Journal of AIDS Research*. Chap 10, pp. 157–163.

Ayuo, P. et al. 2013. Frequency and factors associated with adherence to and completion of combination antiretroviral therapy for prevention of mother to child transmission in western Kenya. *J Int AIDS Soc* 16: 17994

Bemelmans, M. 2014. Community-supported models of care for people on HIV treatment in sub-Saharan Africa. *Tropical Med Int Health.*

Boateng, D., Kwapong, G.D. and Agyei-Baffour, P. 2013. Knowledge, perception about antiretroviral therapy (ART) and prevention of mother-to-child-transmission (PMTCT) and adherence to ART among HIV positive women in the Ashanti Region, Ghana: a cross-sectional study. *BMC Womens Health 13: 8.*

Bwirire, L. D. et al. 2008. Reasons for loss to follow-up among mothers registered in a prevention-of mother-to-child transmission program in rural Malawi. *Transactions of the Royal Society of Tropical Medicine and Hygiene*. Chap 102, pp. 1195–1200

Chinkonde, J. R., Sundby, J., and Martinson, F. 2009. The prevention of mother-to-child HIV transmission programme in Lilongwe, Malawi: why do so many women drop out? *Reprod Health Matters 17:* pp. 143–151

Cohn, S. E. et al. 2008. Prior illicit drug use and missed prenatal vitamins predict non adherence to antiretroviral therapy in pregnancy: adherence analysis A5084. *Aids Patient Care and Stds*. 22, pp. 29–40.

Creswell, J.W. and Creswell, J.D., 2014. Research design: Qualitative, quantitative, and mixed methods approach. *Sage publications.*

Delvaux, T. et al. 2009. Determinants of Non adherence to a Single-Dose Nevirapine Regimen for the Prevention of Mother-to-Child HIV Transmission in Rwanda. *JAIDS Journal of Acquired Immune Deficiency Syndromes 50:* pp. 223–230.

DiMatteo, M. R. 2004. Social support and patient adherence to medical treatment: a meta-analysis. *Health Psychology, vol. 23, no. 2*, pp. 207–218.

Duff, P. et al. 2010. Barriers to accessing highly active antiretroviral therapy by HIV-positive women attending an antenatal clinic in a regional hospital in western Uganda. *J Int AIDS Soc.*

Duncombe, C., 2015. Reframing HIV care: putting people at the center of antiretroviral delivery. *Tropical Med Int Health.*

Ferguson. L. et al. 2012. Patient Attrition between Diagnosis with HIV in Pregnancy-Related Services and Long-Term HIV Care and Treatment Services in Kenya: A Retrospective Study. *Jaids-Journal of Acquired Immune Deficiency Syndromes 60:*

Gao, F. et al., 1999. Origin of HIV-1 in the chimpanzee Pan troglodytes. *Nature 397*:pp. 436-41.

Gilks, CF. et al., 2006. The WHO public-health approach to antiretroviral treatment against HIV in resource-limited settings. *Lancet. 368* (9534), pp. 505–10.

Granich, R. M. et al. 2016. Universal voluntary HIV testing with immediate antiretroviral therapy as a strategy for elimination of HIV transmission: a mathematical model. *Lancet. 2009;373 (9657):pp. 48-57.*

Greeff, *M.* et al. 2008. Disclosure of HIV Status: Experiences and Perceptions of Persons Living with HIV/AIDS and Nurses involved in their care in Africa. *Qual Health Res, 18, 311.*

Guba, E. G and Lincoln, Y. S. 1982. Epistemological and methodological bases of naturalistic inquiry. *ECTJ. 30(4),* pp. 233-252

Hecht, R. et al., 2010. Financing of HIV/AIDS programme scale-up in low-income and middle-income countries. *Lancet*. pp. 1254–60.

Hirschhorn, L.R. et al., 2013. From scaling up to sustainability in HIV: potential lessons for moving forward. *Glob Health.*

Hodgson, I. et al. 2014. A systemic Review of individual and contextual factors affecting ART initiation for HIV infected pregnant women. University of Southampton. United Kingdom.

Holden, M. T and Lynch, P. 2004. Choosing the appropriate Methodology: Understanding Research Philosophy. *The marketing review. 4(4),* pp. 347-409

Jerome, J. S., Galvao, M. T. G., and Lindau, S. T. 2011. Brazilian mothers with HIV: experiences with diagnosis and treatment in a human rights based health care system. *Aids Care-Psychological and Socio-Medical Aspects of Aids/Hiv 24*: pp. 491–495

Kasenga, F. 2010. Making it happen: prevention of mother to child transmission of HIV in rural Malawi. *Glob Health Action 3.*

Katz, I. et al., 2014. Where will the money come from? Alternative mechanisms to HIV donor funding. *BMC Public Health*.

Kavanagh, M. M., Headley, J., and Russell, A. 2015. Political factors behind US global AIDS programmes slow-down. *Lancet.* pp. 419–20

Kinfu, Y., Dal, M. R., Mercer, H., and Evans, D. B. 2009. The health worker shortage in Africa: are enough physicians and nurses being trained? *Bull World Health Organ*. Chap 3. pp. 225–30

Kirsten, I. et al. 2011. Adherence to Combination Prophylaxis for Prevention of Mother-to-Child-Transmission of HIV in Tanzania. *PLoS ONE 6.*

Kumar, R, 2011. Research Methodology, a Step-by-Step Guide for Beginners. *Los Angeles, CA SAGE*

Kvale, S. 2003. The psychoanalytic interview as inspiration for qualitative research, in P.M. *Camic.*

Larson, H.J., Bertozzi, S., and Piot, P. 2011. Redesigning the AIDS response for long-term impact. *Bull World Health Organ*. Chap 11, pp. 846–51

Mackian, S., Bedri, N. and Lovel, H. 2004. Up the garden path and over the edge: Where might health-seeking behaviour take us? *Health Policy Plan.19 (3),* pp. 137-146.

Maurice, M. 2013. Factors influencing uptake of HIV testing and non-initiation of and attrition from ART care in Lusaka, Zambia. Basel.

McDonald, K., and Kirkman, M. 2011. HIV-positive women in Australia explain their use and non-use of antiretroviral therapy in preventing mother-to-child transmission. *Aids Care-Psychological and Socio-Medical Aspects of Aids/Hiv.* Chap 23, pp. 578–584.

Medley, A., Garcia-Moreno, C., McGill, S., and Maman, S. 2004. Rates, barriers and outcomes of HIV serostatus disclosure among women in developing countries: Implications for prevention of mother-to-child transmission programmes. *Bull World Health Org. 82*, pp. 299–307.

Mellins, C. A. et al. 2008. Adherence to antiretroviral treatment among pregnant and postpartum HIV-infected women. *Aids Care-Psychological and Socio-Medical Aspects of Aids/Hiv. Chap 20*, pp. 958–968

Mepham S. et al. 2011. Challenges in PMTCT antiretroviral adherence in northern KwaZulu-Natal, South Africa. *Aids Care-Psychological and Socio-Medical Aspects of Aids/Hiv 23*: pp. 741–747

MOH, 2016. Program Report Update. Kampala, Uganda.

MOH, 2016.National HIV Testing Services Policy and Implementation Guidelines. Kampala, Uganda.

Mukherjee, J. S. et al. 2006.Antiretroviral therapy in resource-poor settings. Decreasing barriers to access and promoting adherence. *J Acquir Immune DeficSyndr.*

Musheke, M., Bond, M. and Merten, S. 2012. Individual and contextual factors influencing patient attrition from antiretroviral therapy care in an urban community of Lusaka, Zambia. *J Int AIDS Soc. 15(Suppl 1), 17366.*

Mushi, A. K. et al, 2017. Linkage into care among newly diagnosed HIV-positive individuals tested through outreach and facility-based HIV testing models in Mbeya, Tanzania: a prospective mixed-method cohort study. *BMJ Open, 7(4), p.e013733.*

Myer, L. et al 2012. Pilot programme for the rapid initiation of antiretroviral therapy in pregnancy in Cape Town, South Africa. *Aids Care-Psychological and Socio-Medical Aspects of Aids/Hiv. Chap 24,* pp. 986–992.44.

Nassali, M. et al. 2009. Access to HIV/AIDS care for mothers and children in sub-Saharan Africa: adherence to the postnatal PMTCT program. *Aids Care-Psychological and Socio-Medical Aspects of Aids/Hiv 21:* pp. 1124–1131

O'Gorman, D. A., Nyirenda, L. J., and Theobald, S. J. 2010. Prevention of mother-to-child transmission of HIV infection: views and perceptions about swallowing nevirapine in rural Lilongwe, Malawi. *BMC Public Health 10: 354*

Okot-Chono, R. et al., 2009. Health system barriers affecting the implementation of collaborative TB-HIV services in Uganda. *The international journal of tuberculosis and lung disease*. Chap 8, pp. 955–61.

ONUSIDA, 2017. Programme on HIV/AIDS.pp.1–248. Available at: http://www.unaids.org/sites/default/files/media_asset/20170720_Data_book_2017_en.pdf , MoH. (Accessed on 10 march 2019)

Parker, R. G., Easton, D. and Klein, C. H. 2000. Structural barriers and facilitators in HIV prevention: A review of international research. *AIDS. 14(Suppl. 1), S22-S32.*

Peltzer, K., Sikwane, E., and Majaja, M. 2011. Factors associated with short-course antiretroviral prophylaxis (dual therapy) adherence for PMTCT in Nkangala district, South Africa. *ActaPaediatrica 100:* pp. 1253–1257

Piot, P. et al., 2015. Defeating AIDS—advancing global health. *Lancet*. pp. 171–218.

Sanga, et al. 2017. Linkage into care of newly diagnosed HIV positive individuals tested through outreaches and facility based HIV testing models in Mbeya region in Tanzania.

Rabkin, M. and El-Sadr, W.M. 2011. Why reinvent the wheel? Leveraging the lessons of HIV scale-up to confront non-communicable diseases. *Glob Public Health.* Chap. 3. pp. 247–56.

Rena, C. P. et al. 2016. Facilitators and Barriers of Antiretroviral Therapy Initiation among HIV Discordant Couples in Kenya: Qualitative Insights from a Pre-Exposure Prophylaxis Implementation Study. *PLoSONE11.*

Roura, M. et al. 2009. Barriers to sustaining antiretroviral treatment in Kisesa, Tanzania: a follow-up study to understand attrition from the antiretroviral program. *AIDS Patient Care and STDs, vol. 23, no. 3,* pp. 203–210.

Rufu, A. et al. 2017. Implementation of the "test and treat" policy for newly diagnosed people living with HIV in Zimbabwe.

Schneider, H. et al., 2006. Health systems and access to antiretroviral drugs for HIV in Southern Africa: service delivery and human resources challenges. *Reprod Health Matters.* Chap 27. pp. 12–23.

Spielberg, F. et al. 2003. Overcoming barriers to HIV testing: preferences for new strategies among clients of a needle exchange, a sexually transmitted disease clinic, and sex venues for men who have sex with men. *Journal of Acquired Immune Deficiency Syndromes, 32(3),* pp. 318–327.

Stinson, K. and Myer, L. 2012. Barriers to initiating antiretroviral therapy during pregnancy: a qualitative study of women attending services in Cape Town, South Africa. Ajar-African Journal of Aids Research 11: pp. 65–73

The Global Fund. http://www.theglobalfund.org/en/ (accessed March 1, 2019).

The United States President's emergency plan for AIDS relief. http://www.pepfar.gov/ (accessed, March 1, 2019).

UBOS, 2017. National Population and Housing census 2014 Area Specific profiles: Wakiso District. Kampala. Uganda.

UDHS, 2016. Uganda Demographic Health Survey report. Kampala, Uganda.

Ujiji, O. A. et al. 2011. Reasoning and deciding PMTCT-adherence during pregnancy among women living with HIV in Kenya. *Culture, health & sexuality 13*: pp.829–840.

UAC, 2016. Uganda Aids Commission Health report 2016. Kampala, Uganda.

UNAIDS, 2017. Global information and education on HIV and AIDS.

UNAIDS, and Henry, J. K., 2015. Financing the response to HIV in low- and middle-income countries: international assistance from donor governments in 2014. https://kaiserfamilyfoundation.files.wordpress.com/2014/07/7347-10-*financing-the-response-to-hiv-in-low-andmiddle-income countries.pdf*, (Accessed 17 Mar 2019)

UNAIDS, 2015. UNAIDS announces that the goal of 15 million people on life-saving HIV treatment by 2015 has been met nine months ahead of schedule. Press Release: http://www.unaids.org/en/resources/presscentre/pressreleaseandstatementarchive/2015/july/20150714_PR_MDG6report (accessed March 3, 2019).

UNAIDS. 2015. Empower Young Women and Adolescent Girls: UNAIDS & the African Union: Reference: 2015 Fast-Tracking the End of the Aids Epidemic in Africa. Joint United Nations

Programme for HIV/AIDS, [online] pp.1–32. Available at: <http://www.unaids.org/sites/default/files/media_asset/JC2746_en.pdf>.

Varga, C., and Brookes, H. 2008. Factors influencing teen mothers' enrollment and participation in prevention of mother-to-child HIV transmission services in Limpopo Province, South Africa. *Qual Health Res 18*: pp. 786–802.

Waddell, E. N. and Messeri, P. A. 2006. Social support, disclosure and use of antiretroviral therapy. *AIDS Behav.10*, pp. 263-72.

Watson, J. D. et al. 2012. Missed opportunities: poor linkage into ongoing care for HIV-positive pregnant women in Mwanza, Tanzania. *PLoS One 7: e40091*

WHO, 2017.WHO. Regional office in Africa. https://www.afro.who.int/news/uganda-launches-hivaids-test-and-treat-guidelines-world-aids-day-commemoration. (Accessed on March 2, 2019)

WHO. 2003. Gender Dimensions of HIV Status Disclosure to Sexual Partners: Rates, Barriers and Outcomes: A Review Paper. *Geneva. WHO*. Available at: http://www.who.int/gender/documents/women_and_girls/9241590734/en/. (accessed on 15th April 2019)

Windisch, R. et al., 2011.Scaling up antiretroviral therapy in Uganda: using supply chain management to appraise health systems strengthening. *Glob Health.*

APPENDIX I: CLIENT CONSENT FORM

Information about the study

Hello, I am Mr. **Akol Michael**, a student of Master of Public Health in Population and Reproductive Health from Uganda Martyrs University. I am conducting a research study as part of the requirement for the partial fulfillment of the award of the Master's program. My study focuses on **"INITIATION IN TO ART OF HIV POSITIVE CLIENTS AT HIV TESTING SERVICE OUTREACHES IN WAKISO DISTRICT".** I humbly request you to participate in this study which is for academic purposes. Your views, opinions and responses will purely be used for the purpose of the study.

Study Procedures

The study will involve an interview between the researcher and you about the above mentioned study, with the researcher asking you questions which are deemed relevant for the study. The interview shall take about 20 – 30 minutes.

Benefits and Risks

Acceptance to participate in the study has both direct and indirect benefits. The direct benefits will include the principal researcher answering your questions in respect to ART. In case you need further information or particular form of care, you will be referred for appropriate services. Information generated from this study will help relevant authorities in formulating strategies for improving ART initiation in outreaches. No risks are anticipated by your participation in the study.

Confidentiality

The information you provide will be treated with strict confidentiality. Your name will not be recorded anywhere, and your specific identifier will not appear in the report that will be generated from the study.

Voluntary Participation

Taking part in this study is entirely voluntary. If you decide not to take part, no accusation will be made against you at all. If you agree to take part in this study, you will be contributing to the national efforts of tackling low rates of ART initiation and coverage. It is therefore important that you participate although you are free to decline. If some question(s) are difficult or make you uncomfortable, I can skip them. You may also ask me to clarify any question(s) if you do not understand them. You may also decide to stop the interview at any time.

If you agree to participate, you will be asked to sign this consent form.

Do you have any questions about the study?

Would you be willing to participate in our study?

Yes ☐ No ☐

Certification

I have read this consent form and/or have had explained to me to my satisfaction the information relating to this study. I understand what my participation will involve and agree to take part in this interview under the terms of this agreement in the topic **"INITIATION IN TO ART OF HIV POSITIVE CLIENTS AT HIV TESTING SERVICE OUTREACHES IN WAKISO DISTRICT".** I have had the opportunity to ask question(s) about it, and my question(s) have been answered to my satisfaction. I consent voluntarily to participate in this study and I understand that I have the right to withdraw at any time, without it in any way affecting me

Date_____Signature or thumbprint of participant _____

Researcher's Name _____ Date _____

Signature _____

Contact information

In-case you have any questions regarding this study, call the Principal Investigator: Mr. **AKOL MICHAEL** on Tel: +256 775 120 042, (0)759 291 193 or email: michaelakol41@gmail.com. If you have any issues pertaining to your rights and participation in the study please contact the Chairperson of the Institutional Review Board, University Martyrs' University, or the Uganda National Council of Science and Technology, on plot 6 Kimera Road, Ntinda, Kampala, Tel 0414 705 500.

APPENDIX II: CLIENT QUESTIONNAIRE

Interviewer to complete this part before the interview starts.

PR1.1 Interview ID number in the form of 001, 002, 003... ……

PR1.2 Date of interview DD/MM/YYYY /……..…

PR1.3 Interviewer name or code …….

PR1.4 Name of facility ……Outreach point……

PR1.5 Time and duration of interview (24:00hrs clock)…….……

Level of ART initiation

PR2.1 Client diagnosed positive with HIV

Yes ☐ No ☐

PR2.2 Client initiated into ART

Yes ☐ No ☐

Individual factors of Initiation into ART

PR3.1 Sex of the participant.

Female ☐ Male ☐

PR3.2. How old are you? (In years)

15-19 ☐ 20-24 ☐ 25-29 ☐ 30-34 ☐ Above 35 ☐

PR3.3 What is your marital status?

Single ☐ Married ☐ Cohabiting ☐ Widowed ☐

PR3.4 What is your Religion?

Anglican ☐ Catholic ☐ Moslem ☐ Pentecostal ☐)A ☐

Other, specify……

PR3.5 What is your level of education completed?

None ☐ Primary ☐ Secondary ☐ College/University ☐

PR3.6 Are you currently sick? (Health status at time of testing)

Not feeling well/Sick ☐ Feeling well/Healthy ☐

PR3.7 Did you test with your partner/spouse? (Disclosure)

Yes ☐ No ☐

Why……

……

……

PR3.8 Were you told the disease (HIV/AIDS) had become severe in your body?

Yes ☐ No ☐

PR3.9 What is your occupation?

Salaried ☐ self-employed ☐ Unemployed ☐ ty/casual ☐

PR3.10 What is the occupation of your partner/spouse?

Salaried ☐ self-employed ☐ Unemployed ☐ ty/casual ☐

PR3.11 What is your current level of income?

High ☐ medium ☐ low ☐

Health Facility/Outreach factors of Initiation into ART

PR4.1 Was this outreach reachable to you? (Within 5Km OR more)

Yes ☐ No ☐

PR4.2 Did you prefer to get HTS from his outreach?

Yes ☐ No ☐

Why……

……

……

PR4.3 Do you trust the test results given to you in this outreach?

Yes ☐ No ☐

Why……

……

PR4.4 Were the health workers friendly to you?

Yes ☐ No ☐

PR4.5 Were you satisfied with the answer(s) if any, that the health worker(s) provided?

Yes ☐ No ☐

PR4.6 From the time you got into this outreach, how long did it take you to receive the last service? (Minutes)

Less than 10mins ☐ 10-20 ☐ 20-30 ☐ more than 30 ☐

PR4.7 Were you able to receive any other service(s) you wanted besides HTS in this outreach?

Yes ☐ No ☐

If yes, which service(s)? ……...

Socio-cultural factors of Initiation into ART

PR5.1 Will you disclose your HIV test results to your family member(s)?

Yes ☐ No ☐

Why……

……

PR5.2 What kind of support will you want from your family member (s)?

Financial ☐ Physical ☐ Psychological ☐

Any other, specify……..

PR5.3 Does your religion support ART for HIV positive persons?

Yes ☐ No ☐

Why/How……

PR5.4 Does your culture support ART for HIV positive persons?

Yes ☐ No ☐

Why/How……

…….……

PR5.5 Is there any existing community support group(s) for PLHIV in your community?

Yes ☐ No ☐

PR5.6 Will you enroll in the community support group for PLHIV in your community?

Yes ☐ No ☐

Why……

…….……

PR5.7 Are there any gender sensitive norms/taboos that affect ART for PLHIV in your community?

Yes ☐ No ☐

Specify any……...

PR5.7 In your opinion, how can a diagnosed HIV positive person(s) be helped to initiate into ART?

Thank you

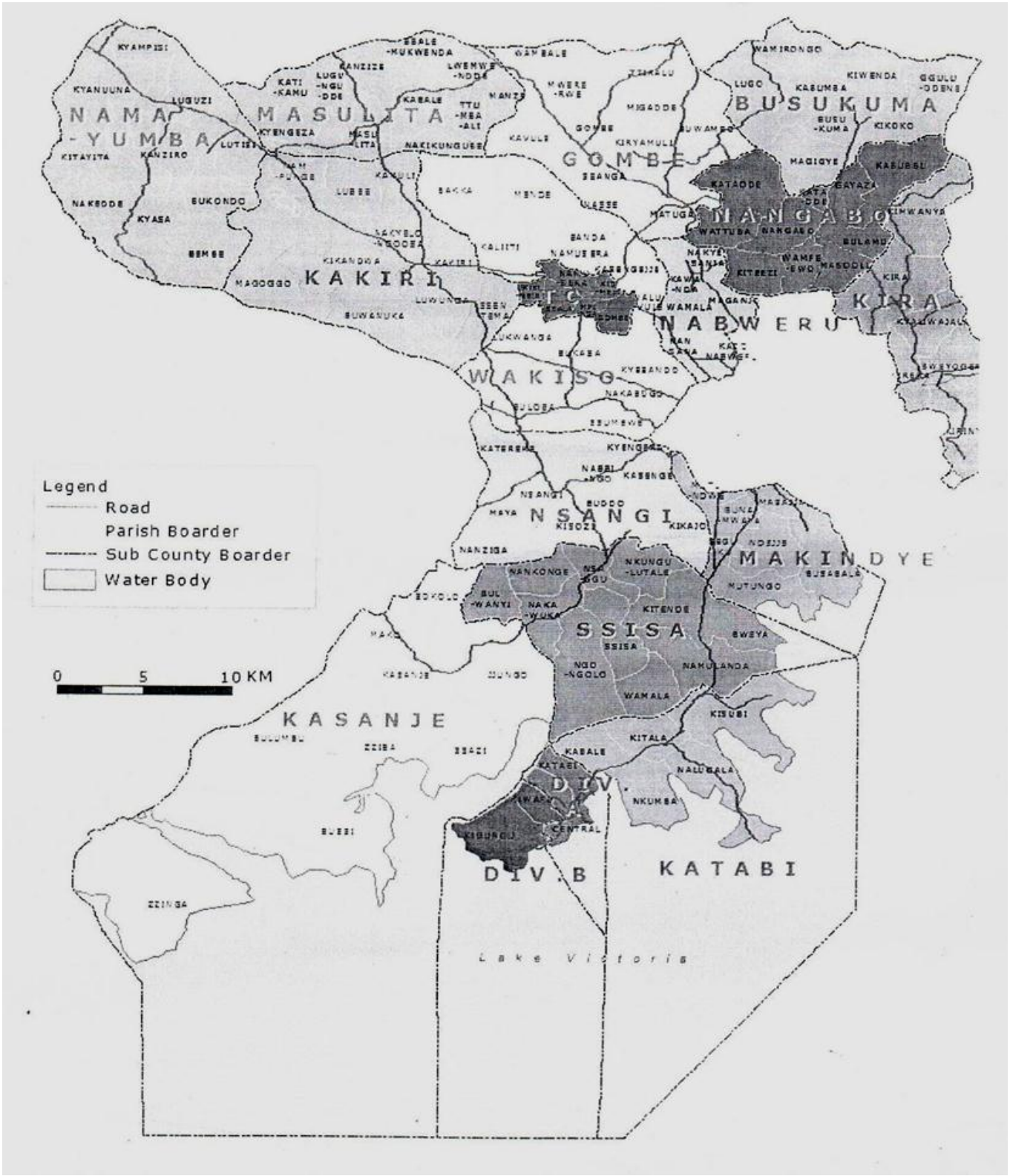
ANNEX 1: WORK PLAN

SN	ACTIVITY	DATE		DURATION (DAYS)	RESPONSIBLE OFFICER	STATUS	
		START	END			N	Y
1	Proposal presentation	12/5/19	12/5/19	1 Day	Researcher	N	
2	Obtaining Research letter from University	13/5/19	13/5/19	1 Day	Researcher	N	
3	Submitting Research letter to the District/Municipal divs	14/5/19	15/5/19	2 Days	Researcher	N	
4	Recruit Research assistants	16/5/19	19/519	4 Days	Researcher	N	
5	Testing data collection tools	20/5/19	21/5/19	2 Days	Researcher, Research assists	N	
6	Data collection	22/5/19	30/6/19	40 days	Researcher, Research assists	N	
7	Data analysis	3/7/19	14/7/19	12 Days	Researcher, statistician	N	
8	Data interpretation	15/7/19	19/7/19	5 Days	Researcher, statistician	N	
9	Completing Dissertation	20/7/19	3/8/19	15 Days	Researcher	N	
10	Submit to Supervisor rough copies	5/8/19	12/8/19	7 Days	Researcher	N	
11	Submit final Copy to supervisor, university	19/8/19	19/8/19	1 Day	Researcher	N	
12	Defend	-	-	-	Researcher	N	

ANNEX 11: BUDGET

SN	ITEM	QNTY	UNIT COST	COST (Ugx)	BUDGETLINE/ SOURCE
1	Pens	2 dozen	15,000	30,000	Self
2	Reams of paper	2	25,000	50,000	Self
3	Note books	10	5,000	50,000	Self
4	Printing	500	500@pg	250,000	Self
5	Wage for Research Assist	5	10,000@day	2,300,000	Self
6	Transport	6	10,000@day	2,760,000	Self
7	Airtime/MBs	6	2,000@day	552,000	Self
8	Eats	5	7,000@day	1,610,000	Self
9	Miscellaneous	-	20,000@	800,000	Self
	TOTAL			**8,422,000**	**SELF**

ANNEX III: A MAP OF WAKISO DISTRICT SHOWING HEALTH FACILITIES/STUDY AREAS



ANNEX IV: INTRODUCTORY LETTER

Uganda
Martyrs
University

Making a difference

Faculty of Health Sciences
Email: health@umu.ac.ug
8th May, 2019

The Responsible Officer

RE: INTRODUCING MR. AKOL MICHAEL

This is to introduce to you **MR. AKOL MICHAEL Reg. No. 2017-M272-20007** who is a postgraduate student in the Faculty of Health Sciences at Uganda Martyrs University. He is pursuing a programme leading to the award of Master of Public Health- Population and Reproductive Health. He is currently on research for his dissertation on the topic:

"INITIATION IN TO ART OF HIV POSITIVE CLIENTS AT HIV TESTING SERVICE OUTREACHES IN WAKISO DISTRICT"

The topic and protocol have been approved by the relevant university authorities.

Any assistance rendered to him in this respect will be highly appreciated by the university.

Yours sincerely,

Ndibazza

Dr. Juliet Ndibazza
Dean,
Faculty of Health Sciences,
Uganda Martyrs University

ANNEX V: ACCEPTANCE LETTER

THE REPUBLIC OF UGANDA

WAKISO DISTRICT LOCAL GOVERNMENT

Office of the District Health Officer
P.O. Box 7218, Kampala Uganda,
Email: wakisodlc@yahoo.co.uk / Website:www.wakiso.go.ug

TOGETHER WE WIN

Ref: Med 218/05/2019 20th May, 2019

The In charge / M.S

.....

PERMISSION TO CONDUCT STUY BY MR. AKOL MICHAEL .

This is to introduce to you the above mentioned student from Uganda Martyrs University, who is going to conduct a research study entitled: "**INTIATION TO ART OF HIV POSITIVE CLIENTS AT HIV TESTING SERVICES OUTREACHES IN WAKISO DISTRICT".**

Please accord her the necessary assistance

Nabuganda Betty
FOR: DISTRICT HEALTH OFFICER.

c.c. Chief Administrative Officer
c.c. Municipal Health Officer Nansana
c.c Municipal Health Officer Kira.
c.c Municipal Health Officer Makinde Sabagabo .
c.c Municipal Health Officer Entebbe
c.c. Town Clerk, Wakiso Town Council.
c.c. Town Clerk, Kasangati Town Council.