UTILIZATION OF HIV/AIDS CLINICAL CARE AND SUPPORT SERVICES AMONG HIV-INFECTED ADULTS IN BARINGO COUNTY, KENYA

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DEDICATION

I would like to dedicate this work to my beloved wife Naomi, my daughters Joysylvia, Jianna, and My son Ethan for their support and understanding throughout the study period. Without them, I wouldn't have made it this far. Thank You, once again, I love you all so much.

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ABSTRACT

The burden of HIV/AIDS in Baringo County is highest among Adults (>18 years), with over 40% of hospital beds occupied by HIV-related illnesses. Despite the majority of HIV/AIDS clients being enrolled in care programs, care interruptions (dropouts) and loss of follow-up remain major challenges with unclear reasons for defaulting. Therefore, this study aimed to investigate HIV/AIDS care and support service utilization among HIV-infected adults in Baringo County, examining the relationship between client uptake,

attitudes, accessibility and utilization of services. It also examined the impact of stigma and discrimination on service utilization. The study was conducted in Baringo County among HIV-infected adults enrolled in Comprehensive care centers using an analytical cross-sectional study design. A total of 580 study participants were randomly recruited u ng Fisher et al.'s (1998) formula from four purposefully selected sub-counties. Besides, an interviewer-administered questionnaire was used to collect data. Quantitative data was analyzed using Statistical Package for Social Sciences (SPSS) version 27 with Inferential statistics (Univariate and bivariate) analyses conducted at a p = 0.05 significance level. Whereas, qualitative data was transcribed and analyzed thematically. Ethical clearance was sought from the Institutional Scientific and Ethics Review Committee at Masinde Muliro University (Ref No: MMU/COR: 403012 Vol 6 (01), the National Commission for Science, Technology and Innovation (NACOSTI) (Ref No: 963149), the Baringo County Government Department of Health (REF: BCG/HS/RES/01/VOL.1/07), and informed consent from participants. A total of 519 (89.5%) out of a sample size of 580 took part in the study. The Study found 50.7% HIV care uptake, with 80% deterred by a lack of knowledge and high transportation costs (72.3%). The majority of participants (90.6%) had positive attitudes towards HIV care and support services, but utilization was unfavorable due to low knowledge of available services (p = 0.001), fear of ARV drug use when the spouse is watching (p< 0.0001), and long distances to clinics (p 0.0001). Besides, statistically significant factors affecting the accessibility of clinic services were difficulty obtaining services (p < 0.0001), and long distance to clinics (p 0.0001), with clients unlikely to use them. HIV-related stigma and discrimination were found to negatively impact participants' utilization of services, with participants feeling ashamed to attend clinics (p<0.0001) and others judging them when seen attending clinics (p<0.0001), leading to low utilization rates with higher odds found in each case. In conclusion, the study found 50.7% of HIV-infected adults in Baringo County consistently utilize HIV care and support services, with higher education, community support services, counseling, and family support promoting utilization of services. However, factors like low socioeconomic status, long distances, high travel costs, and poor medication perception were associated with poor attitudes towards utilisation of services. Additionally, location optimization and clinic opening on holidays and weekends improve accessibility. Whereas, PLHIV were found to internalize the stigma and bigotry they face, contributing to a negative self-image and lower levels of utilization. The study recommends to the MOH increase HIV/AIDS care utilization through decentralization of services to the community or low-tier facilities, stigma reduction, integration of HIV care with other services, and scaling up services in under-resourced areas.

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LIST OF ABBREVIATIONS AND ACRONYMS

ABM: Andersen's Behavioral Model

AIDS: Acquired Immuno-Deficiency Syndrome

CCC: Comprehensive Care Center

CHW: Community Health Worker

FSW: Female Sex Worker

HBC: Home-Based Care

HIV: Human Immunodeficiency Virus

MOH: Ministry of Health

PHC: Primary Health Care

PLWHA: People Living with HIV/AIDS

TBA: Traditional Birth Attendants

UNAIDS: The Joint United Nations Programme on HIV/AIDS

VCT: Voluntary Counselling and Testing

OPERATIONALIZATION OF TERMS

Accessibility Refers not only to the initial opportunity to enroll in a comprehensive care clinic and begin receiving ART services but also to the ability to continue receiving the care, prescribed medication regimen and support services

Adults Adults are people over the age of 18 years

AIDS Acquired Immune Deficiency Syndrome: a disease caused by HIV virus which weakens the body's cellular immunity resulting to attack by a cluster of medical conditions.

Attitude How an individual Living with HIV/AIDS or Community thinks and acts on HIV/AIDS

Attrition Eligible Clients who has had no visit to HIV care and support clinic within six months or more either due to clients not consenting to care, drop out from care or with intermittent visits

Care : Promotion of a person's well-being through medical, physical, psychosocial, spiritual and other means.

Stigma : A social process of devaluing persons, beginning with marking or labeling someone's differences, then attributing negative connotations or values to those differences; this process leads to distancing and separation of the person, culminating in discrimination.

Patient in HIV Care : This refers to a HIV positive client registered at a comprehensive care clinic for purposes of accessing care, treatment and support services

Support services : Refers to any service provided to meet HIV-relevant needs of people living with HIV, other than those provided as part of primary or secondary clinical care.

Uptake The number of participants who consistently show up for clinics and follow through on the recommended treatments without defaulting.

Utilization : Refer to the number of visits/ consultations made (at least once) by an individual in the last six months with a comprehensive care Center

CHAPTER ONE

INTRODUCTION

1.1. Overview

This chapter focuses on the subject matter under investigation and integrates the study's background, the problem statement, and the study objectives. This section further provides the study's justification, limitations, conceptual framework, and operational definitions.

1.2. Background to the Study

HIV care and support services are defined by the Joint United Nations Program on HIV/AIDS (UNAIDS) (2016) as essential clinical non-antiretroviral therapy services, the management of HIV-related infection, and non-clinical services that, in conjunction with antiretroviral therapy, can lower the incidence of ill health and AIDS-related fatalities among people living with HIV/AIDS. While Chimoyi et al. (2022) noted that utilization of HIV care necessitates ongoing participation in health services from the time of enrollment in care until discharge or death (Chimoyi et al., 2022).

Globally, the Human Immunodeficiency Virus (HIV) is the virus that injures the human body's immune system, resulting in acquired Immunodeficiency Syndrome (AIDS), which remains one of the world’s most serious health and developmental challenges today. About 37.7 million people are currently living with HIV worldwide and tens of millions have died from AIDS-related causes since the epidemic began (UNAIDS, 2021b).

In recent decades, tremendous efforts have been made around the world to save millions of lives due to the threat of HIV-AIDS. This has led to great scientific progress and accumulation of knowledge over the last 30 years. However, many people, especially in

developing countries, are living with HIV/AIDS and are still unable to access the HIV care and support services (UNAIDS, 2021a).

For instance, by the end of 2020, 27.4 million people with HIV (73%) were utilizing HIV care and treatment (antiretroviral therapy) globally (UNAIDS, 2021b), leaving out approximately 10.2 (28%) million people still waiting. Therefore, to meet the recently suggested "95-95-95-95" target (95% combination of prevention, 95% detection, 95% treatment, and 95% viral suppression), as well as the worldwide aim of eradicating AIDS by 2030, consistent utilization of HIV/AIDS care and treatment by HIV infected clients is required (WHO, 2017).

Sub-Saharan Africa incorporates to a great extent two-thirds of the global population of People Living with HIV/AIDS, hence becoming the most affected region of the world by the HIV/AIDS pandemic (Kharsany *et al.,* 2016; UNAIDS, 2019). In Eastern and Southern Africa, approximately 20.7 million people have tested HIV positive, which represents more than half (54%) of all people living with HIV globally (UNAIDS, 2019). There is a generalized HIV epidemic in nearly all of the region's nations, with their national HIV prevalence being greater than 1%. "Although laws and cultural traditions vary between East and Southern African countries, there are a number of ingrained cultural, structural, legal, and stigmatizing factors that are barriers to the utilization of HIV care and treatment", (UNAIDS, 2019).

Kenya is the fourth-largest HIV epidemic in the world, with the epidemic being geographically diverse. In 2018, the total number of people living with HIV (PLHIV) in Kenya was estimated at approximately 1.6 million, with a total of 1.3 million being adults

(KENPHIA, 2018). In the same year, 25,000 people died from AIDS-related illnesses. Therefore, the current statistics shows the highest burden of HIV in the age category of 15–49 years in Kenya (KASFII, 2020/2021 – 2024/25). This High HIV prevalence in Kenya is associated with social and cultural factors, including stigma, discrimination, gender violence, poverty, and substance use (KENPHIA, 2018).

In Baringo County, the HIV pandemic is not only a health problem but also a developmental issue as it encompasses socio-economic and cultural dimensions. The prevalence of HIV/AIDS stands at 3%, with males at 2.6% and females at 4.3% (BCASP, 2015 – 2019b). The prevalence is higher in urban areas like Eldama Ravine, Margat, and Kabarnet Town than in rural areas, with 90% of the infections occurring among people aged 15–49 years. Just like in other parts of Kenya, all regions are affected, and over 40% of hospital beds are occupied by HIV/AIDS patients (BCASP, 2015 – 2019b). The National AIDS Control Council of Kenya (2018) revealed that about 5,874 people live with HIV in Baringo County. This represented 0.39% of the total number (1,493,382) of people living with HIV/AIDS in Kenya. Moreover, most HIV/AIDS deaths occur between the ages of 25–35 for men and 20–30 for women, which are the most productive ages (BCASP, 2015 – 2019b).

It is worth noting that the County has an adequate number of health facilities. However, not all of the facilities that are able to provide comprehensive HIV-related services (BCASP, 2015 – 2019a). Additionally, it is thought that cultural beliefs influence how people perceive their health and are a major factor in the county of Baringo's poor healthcare service consumption in the name of preserving culture.

The Tujenge Jamii project of the U.S. Agency for International Development (USAID) and the county government fund a specialized outpatient comprehensive care clinic located in the Baringo sub-counties that offers HIV care and support services. Approximately 6,000 PLWHA are registered in these clinics for treatment follow ups. ART medication delivery is one of the care and support services that are regularly provided, along with therapy and other services e.g. treatment of opportunistic infections, Nutritional counselling, adherence support and reproductive health services. Besides, Internal medicine services are frequently provided by hospital wards that take inpatient patients.

Before beginning ART treatment, a patient must first get counseling. Then the individuals go through a variety of investigations and examinations, which include a CD4 count. The first follow-up appointment is set for one month after ART is started. Patients get buffer tablets during the first two days of therapy. After that, there will be a three-month gap between the next two appointments. Thereafter, the visits are then scheduled every six months following that. Two weeks after the planned visit date, one of the adherence counselors follows up with patients who have missed a clinic appointment. Then, referrals for extra-adherence counseling are made for patients who exhibit missing visits or who intermittently stop receiving therapy.

As result, Baringo County Government has in turn set targets to have at least 100% of the PLWHA enrolled and utilize care and support services (BHSSP, 2019–2022). There is no known research on study area that has been conducted in the study area on the utilization of HIV/AIDS care and support services among infected adults in order to identify the most effective ways to provide high-quality care for the county residents.

1.3 Statement of the Problem

According to the reports from Kenya MOH (2020), over 1.1 million adults living with HIV/AIDS are currently enrolled in HIV care programs, and the majority have been reported to have stopped utilizing HIV care and support services (KASFII, 2020/2021 – 2024/25). In a recent study by Yonga et al. (2020) on temporary disengagement from HIV care at Baringo County Hospital, of 342 patients who participated in the study, 76.9% had a history of disengagement and reengagement at least once, with 33% lost to follow up. Similarly, in a Preliminary survey done at Baringo County Hospital's HIV/AIDS Comprehensive Care Center (CCC) as per the first quarter of 2020, with a total clientele of 2926 enrolled, 1129 (38.6%) adults were actively involved in care. While about 61.4% were lost to follow-up, transferred, or died. At Kabartonjo Sub County Hospital CCC, of the 542 clienteles enrolled, 256 (47.2%) were reported to be actively engaged in care, while 286 (52.8%) were reported to have been lost to follow up, transferred to other facilities or died. However, the reasons for drop outs remains unclear in this region.

Previous research from other regions has demonstrated that the PLWHA's capacity to consistently use HIV care and support services plays a crucial role in achieving positive health outcomes, halting the development of drug-resistant strains of the disease, mortality, and higher health care costs (Shen et al., 2023). In contrast, suboptimal utilization of HIV treatment and care correlates with worse health outcomes (Lai et al., 2023; Zinski et al., 2015). Consequently, loss of follow-up following enrollment in care continues to be a major concern throughout the care programs in difficult-to-reach communities, despite substantial advancements in HIV treatment and care services.

As a result, non-utilization and dropouts from HIV care and support programs are alarming issues in Kenya, with many clients dying from advanced HIV disease (Altice *et al.,* 2019; Ugwire, 2020). In its effort to end HIV/AIDS, the Baringo County Department of Health aims to enroll 100% of PLWHA to utilize HIV/AIDS care and support services. The current antiretroviral coverage of 70% is still below the target of the county's 100% overall target (BHSSP, 2019-2022). There is a need for enhancing clinical and community health care structures to improve the quality and coverage of HIV/AIDS treatment and ensure optimal utilization of HIV care and support services. However, little is known about the factors that influence how HIV care services are used after enrolling in care, including individual considerations, community values, and cultural views. Hence, there is a need to investigate factors influencing the utilization of HIV/AIDS care and support services by HIV-infected persons in Baringo County and establish measures to ensure that these services reach those who need them.

1.4 Objectives

1.4. 1 Main Objective

To investigate factors influencing utilization of HIV/AIDS care and support services by HIV-infected persons in Baringo County.

1.4.2 Specific Objectives

1. To assess the uptake of HIV/AIDS care and support services among the HIV infected-adults in Baringo County.

2. To examine the association between the attitude of HIV Clients towards HIV/AIDS care and Support services and their utilization of the services in Baringo County.
3. To evaluate the influence of accessibility of HIV/AIDS care and support services on utilization of the services among the HIV-infected adults in Baringo, County
4. To analyze the association between stigma and the utilization of HIV/AIDS care and support services in Baringo County.

1.5 Research Questions

1. What is the level of uptake of HIV/AIDS care and support services among HIV infected adults in Baringo County?
2. How does the attitude of HIV clients influence HIV care and support services utilization at Baringo county?
3. Are the current HIV/AIDS Care and Support services accessible by the HIV infected adults in Baringo County?
4. What is the association between stigma and utilization of HIV/AIDS care and support services at Baringo County?

1.6 Justification

The current MOH guidelines promote scaling up of comprehensive package interventions to address coverage and utilization gaps of HIV care and support services, embracing the principle of “leave no one behind”. The focus of HIV/AIDS care is on community-centered approaches, contextualization, and integration of HIV/AIDS care services to meet local needs (KASFII, 2020/2021 – 2024/25). In Baringo County, the level of HIV

care and treatment interruption tends to be much higher with the situation exacerbated by the migrant pastoralists coupled with diverse retrogressive cultures and traditions, challenging geographical and social economic conditions.

Consequently, the Baringo County government reviewed its measures to improve HIV/AIDS care and support services, aiming for quality, affordable, and accessible services (BCASP, 2015–2019a). As a result, efforts have been made by the county health department to put in place HIV/AIDS care and support programmes, along with the use of antiretroviral drugs for treating HIV/AIDS infection. Consistent with the findings of studies done in Southwest Ethiopia and cohort studies done in sub-Saharan Africa (Abera *et al.*, 2015; Fox, 2015; Zürcher *et al.*, 2017), several clients are lost to follow-up after the initiation of HIV treatment, care, and support. Similarly, these rates of dropouts from HIV care at various HIV Care clinics are indicative of a generalized problem faced across HIV Clinics in Baringo County that should be addressed.

This study is therefore timely for Baringo County government and others involved in giving care to the PLWHA because it adds to existing knowledge on influencing factors for utilization of HIV care and support services among the adults at a time when adaptation to control COVID 19 pandemic threatened to interrupt HIV care and treatment. This will play a key role in informing the county government and stakeholders in HIV care programs of the client's outlook for the current care and support programs and helping to contextualize HIV care interventions to retain HIV patients in care and contribute to 100% HIV treatment targets for the county. The results will also help strengthen adoption of innovative, cost-effective and socially effective community HIV care interventions; help the county government develop policies for the expansion of HIV care services to cover all

the regions of the county; and promote integration of HIV care. Subsequently, this will support increased utilization of care and treatment, with particular focus on reducing the loss in the cascade of care.

1.7 Limitations of the Study

The study's primary constraints were related to the county's migratory pastoralist population, unstable geography, and climate. The majority of the sampled participants lived in rural homes, where access to them was restricted by these circumstances. However, the researcher overcame these difficulties by excluding Tiaty subcounty, which was regarded as a banditry hotspot where police operations were ongoing during the study period. Besides, community health volunteers were used to increase accessibility in the housing units where they resided.

Second, due to the large sample size of 580 participants who participated in the study, there were limitations related to resources and time spent on data collection. To overcome this, the researchers used a cluster sampling method to select four sub counties from the six available sub counties. Also, employ community health volunteers who have knowledge of the sampled areas to assist with data collection and to navigate the community unit to which they belong to reach the homes of the sampled participants.

Finally, the use of analytical cross-sectional studies, including those with respondent bias, memory bias, interviewer bias, and social acceptance bias, could make studies prone to bias. However, researcher overcome this limitation by carefully crafting a clear research question with neutral statements and training interviewers before starting data collection.

1.8 Conceptual Model (Andersen's behavioral model)

The Andersen behavioral model is a multilevel conceptual model that consists of both individual and contextual determinants in order to illustrate the factors that influence the use of health care services. The key variables contained in Andersen's Behavioral model include three core factors explaining the usage of health care services. This factor includes Predisposing factors, enabling factors, and need factors.

The predisposing factors include characteristics such as race, age, education, and health beliefs. For instance, an individual who believes health services are an effective treatment for an ailment is more likely to look for health care services promptly. Enabling factors in turn include characteristics such as earnings, hospital density, support from family members, National Health Insurance Funds, communal support, etc., whereas the Need variable comprises both perceived and actual needs for health care services. In 1968, Ronald M. Andersen developed the model, which over time has been expanded through several iterations to its current form, which illustrates that health outcomes are directly proportional to the utilization of health care services (R. M. Andersen, 1995). The Andersen's Behavioral Model (BM) has previously been used in studies to describe the health services utilization (Kadushin, 2004; Pengid et al., 2022).

Using Andersen's behavioral model, this study explored various individual and contextual factors that influence the utilization of HIV/AIDS care and support services by adults living with HIV/AIDS in Baringo County. In addition, this model provided a framework to describe the influence of interactions between individual behaviors, population characteristics, and the surrounding environment, including health care systems through which the HIV infected adults are linked and utilize the HIV care and support services

(Mitchell *et al.*, 2017). This results from a decision-making process through an individual constrained by their position in society and the availability or accessibility of HIV care and support services in Baringo county (Figure 1.1).

A Conceptual framework on utilization of HIV/AIDS care and support services based on Andersen's behavioral model

Independent variables **Modifying variables** **Dependent variable**

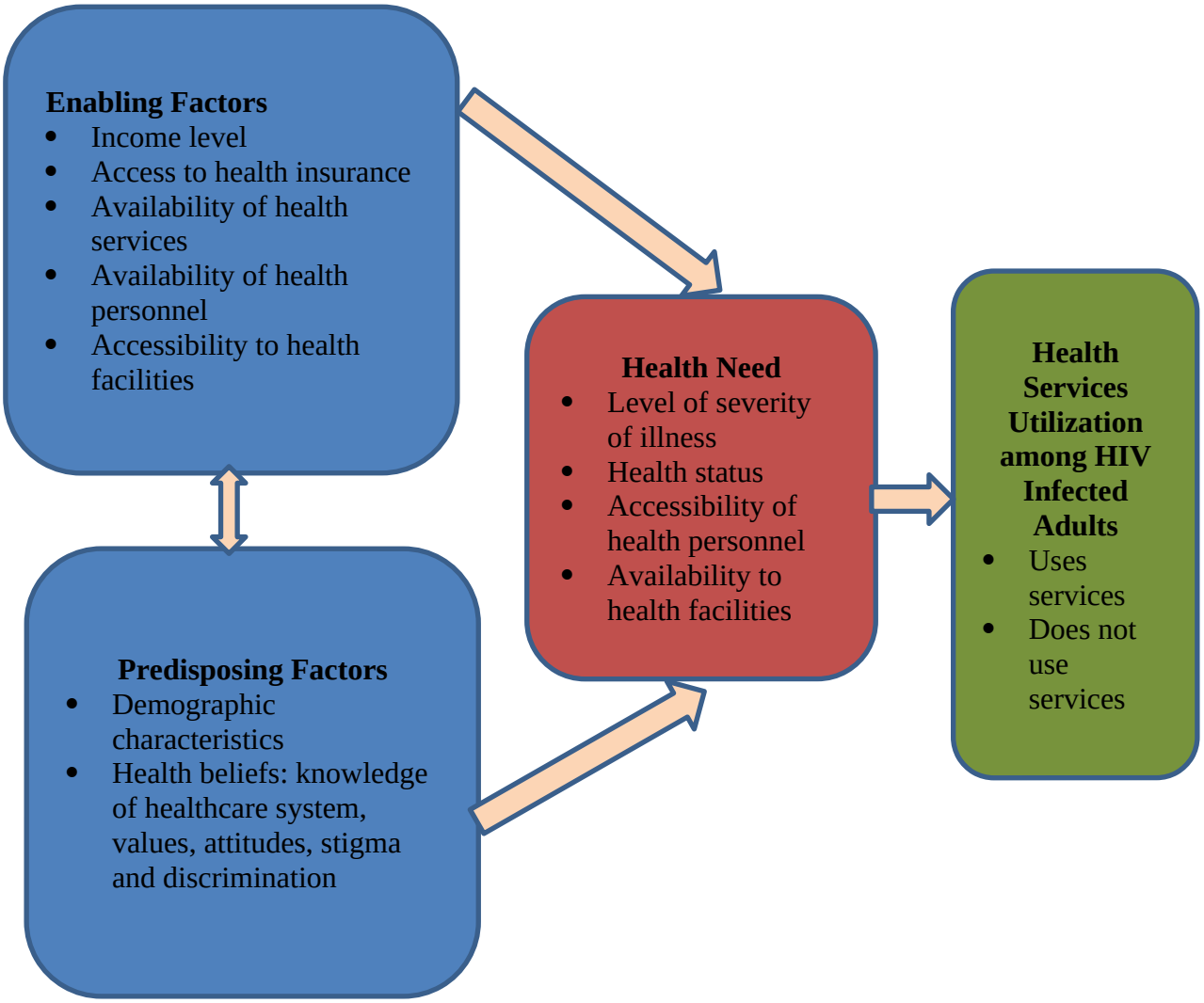


Figure 1.1 : Andersen Behavioral Model (Andersen, 1968)

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

In this section, similar and related literature that is most important for the context of this study was deliberated upon to give background information about HIV/AIDS care and support services. To begin with, the global, regional, Kenyan, and Baringo epidemiology of HIV and AIDS is discussed. This is followed by a section exploring uptake of the care, treatment, and support services essential for the PLWHA, their attitudes and the Andersen Behavioral Model. The determinants for the use of HIV care and support services shall be further discussed in this chapter; predisposing factors, enabling factors, need, health behaviors that are related to the utilization of HIV care and support services shall be finally discussed.

2.2 HIV Epidemiology

An overview of the HIV disease on a global, regional, national, and local [Baringo] scale is given in the epidemiology of HIV and AIDS data that follows.

2.2.1 Global HIV Prevalence

At present, about 38 million people are living with HIV and AIDS globally, which represents both adults and children. However, adult HIV/AIDS prevalence is estimated at 1.2% worldwide. By the end of 2018, available statistics show that HIV/AIDS led to 770,000 deaths from related illnesses, of which 670,000 occurred in Adults (UNAIDS, 2020).

Further, the available statistics show that the majority of people living with HIV/AIDS are in developing countries, with about 68.2% of whom live in sub- Saharan Africa (UNAIDS, 2019). Recently, there has been rapid global development of antiretroviral drugs for the treatment of HIV infection, although the treatments to cure the infection have not been discovered yet. This implies that the PLWHA are considered to be living with a chronic illness which can be managed to enable an individual to live a healthy life.

2.2.2 HIV Prevalence in Sub- Saharan Africa

The vast majority of people infected with HIV and AIDS are located in Sub-Saharan Africa, which constitutes an estimated 68% of global HIV-infected people by 2018 (UNAIDS, 2019). "UNAIDS estimated that at the end of 2018, a total of 25.84 million people was living with HIV in sub-Saharan Africa. Out of this, East and southern Africa were the region most affected by HIV in the world, with 20.6 million people living with HIV. This accounts for two-thirds of the recent overall world HIV infections and more than 70 percent of all AIDS related deaths" (UNAIDS, 2019).

In sub-Saharan Africa, the prejudice against HIV patients, even in clinical settings, is a major contributor to the HIV pandemic. The patients experience stigma, discrimination, and even low levels of acceptance in their communities (Fauk *et al.*, 2022). Compared to other developed countries, undeveloped states in sub-Saharan Africa face great challenges with the set-up and equipment's necessary to control HIV /AIDS disease (Finkelstein et al., 2022).

Moreover, in sub-Saharan Africa there are many health care centers experiencing shortage of staff, drugs, and equipment's essential for the management of HIV and AIDS conditions. This results in poor management of the infection and low accessibility to basic drugs within the communities and health centers for the clients to use (Sidibé, 2015); thus, HIV infection and AIDS remain destructive and now leading with high cases of mortality and morbidity in this region.

2.2.3 Prevalence of HIV in Kenya

In Kenya, the HIV and AIDS epidemic began in 1984, when the first individual tested HIV positive. Unfortunately, there has been a progressive increase in the number of infected cases, making Kenya the fourth nation with the highest number of people living with HIV and AIDS globally. For instance, about one million six hundred thousand cases were reported in 2018, with twenty-five thousand mortalities associated with the HIV and AIDS epidemic (UNAIDS, 2019).

Similarly, there have been numerous campaigns in Kenya to create HIV awareness in the county since the first case was discovered. However, despite the efforts, a noteworthy number of people living with HIV and AIDS have failed to access and utilize HIV care and support services across the county. This is attributed to the low distribution of resources to rural areas coupled with stigma and discrimination (MOH, 2016).

Consequently, there is a need in Kenya to target HIV/AIDS Care interventions at key populations, all geographical locations and strengthen health systems. This is to ensure adults infected with HIV/AIDS can receive timely support, care, and treatment services (MOH, 2016).

2.2.4 Prevalence of HIV in Baringo, County

Baringo County has 5,397 known cases of HIV infection and about one hundred and sixty-three adult cases of mortality reported in 2018 alone that were associated with HIV infection (NACC, 2018). Women are the most affected by HIV infection, representing 2.3% of all cases compared to adult men with 1.4%. This suggests that women are more vulnerable than men to acquiring HIV infection in the country.

However, late enrollment and commencement of treatment are areas of great concern that have yet to be addressed to promote the health and wellness of people living with HIV. There is still a need across the county to promote access to care and support and ensure compliance with treatment for persons living with HIV/AIDS (National AIDS and STI Control Programme, 2016).

The majority of AIDS deaths in the county happen in people who are between the ages of 20 and 30 for women and 25 to 35 for men, which are also the most productive ages. Over 40% of hospital beds are occupied by HIV/AIDS patients, and HIV prevalence varies significantly between sub counties within the country (BCASP, 2015 – 2019b).

The largest group of HIV cases, about 90% of the HIV-infected individuals, reside in urban areas compared to those residing in rural areas. Contrary to this, due to limited healthcare resources for HIV/AIDS care and poor health-seeking behaviors in rural areas, the number of cases of HIV infection might be higher than reported. The persons aged between 15 and 49 represent the most affected, with under-fives being the lowest Number of HIV-infected across the county (BCASP, 2015 – 2019b).

2.3 The Uptake of HIV/AIDS clinical care and support services

The uptake of HIV care and support services by PLWHA is associated with adherence to the clinic schedules without missing the appointments given by the health care workers and consistent uptake of the treatments prescribed. Studies have been conducted to determine the relationship between missed visits and outcomes for HIV clients. For instance, those who enrolled in care at Santiago, Dominican Republic, and missed clinical visits or were lost to follow-up, they were found to have higher viral loads. Whereas, on average, participants who missed fewer HIV appointments were more likely to be virally suppressed (McCarthy *et al.,* 2022).

Similarly, the findings by The Indiana State Department of Health suggest that PLWHA should visit an HIV clinic every 3 to 4 months for CD4 and viral load testing (ISDH, 2019). The report further attests that normal T-cell counts should be between five hundred (500) and one thousand five hundred (1,500), and "if a person's T-cell count drops below 200, they should be considered to have AIDS" (Project, 2020). Therefore, the constant uptake of HIV care and support services is found to be associated with higher viral load findings and improved health (UNAIDS, 2016).

2.3.1 HIV Clinical Care

The global blueprint for HIV-infected adults' care and support has not been developed. As a result, there are variations in HIV / AIDS treatment guidelines across countries of the world. Bor et al. (2021) suggest a higher standard of care for PLWHA should include clinical checkups, early detection, linkage, treatment support, monitoring failure, and continuous compliance which will lead to improved health outcomes by lowering viral loads (Bor *et al.,* 2021).

Consciously, leading a life of normalcy for adults infected with HIV is the ultimate goal for every intervention that is provided in HIV clinical Care. More specifically, the availability and use of antiretroviral therapy (ART) have significantly decreased mortality and morbidity related to HIV and AIDS. Moreover, the development of antiretroviral drugs has significantly changed the perception of HIV/AIDS from a very fatal to a chronic and potentially manageable disease (Kariwala *et al.,* 2022). With this regard, it is indispensable that all PLWHA utilize HIV care services progressively without fail to achieve better health care for all HIV-infected clients.

The underutilization of HIV care services is associated with subpar clinical care, which is currently a bigger barrier to lowering mortality and morbidity for HIV-infected individuals than insufficient access to care. (Kruk *et al.,* 2018). Despite the widespread establishment of HIV care and support services across various healthcare facilities, it has been noted that the outcomes of HIV clinical care services provided to adult HIV clients vary across facilities depending on the caliber of the care and services provided by those specific facilities (Bor *et al.,* 2021). Therefore, this clearly suggests that the use of HIV/AIDS clinical care services may be associated with high-quality, unbiased care that is appropriate for its HIV/AIDS patients' requirements.

2.3.2 HIV/AIDS Support Services

As reported by UNAIDS (2016), the reasons why HIV/AIDS support is crucial include: to make it easier for people to receive treatment as soon as they are diagnosed with HIV; to encourage treatment compliance so that people living with HIV can achieve viral suppression for their own health; to improve the prevention and management of HIV-related infections; and to improve coping with the difficulties of living with HIV.

In addition, numerous areas of support are pertinent to individuals living with HIV/AIDS, according to the UK Consortium on AIDS and international development. This covers familial, community, social, economic, human rights, therapeutic and psychosocial aspects (Aidsconsortium, 2008).

2.3.2.1 Social Support

According to Li et al. (2021), People with HIV/AIDS need social support systems to help them deal with life's challenges and maintain physical and emotional health. Besides, the social support system helps them to reduce their psychological worry and unease, in addition to providing adequate therapy for the relief of physical suffering (Li *et al.,* 2021). Additionally, Kim et al. (2017) indicate that belonging to a social network is crucial for HIV-positive individuals (PLWH) for continued utilization of clinical care. In his observation, an individual's social network consists of family, friends, and community members who can help those living with HIV find social support. These relationships give individual support, identity, and a sense of belonging (Kim *et al.*, 2017).

The results of a study in Kunming City, China found in terms of social assistance, HIV/AIDS patients aged 50 to 59 years old used it the least. The primary source of social support for elderly people with HIV/AIDS was their families (Li *et al.,* 2021). However, Roscoe *et al.,* (2019) in pursuit of reliable health care and finding the ideal support services for adults infected with HIV/AIDS attests that an individual’s commitment to use the support services can be influenced by the social support systems either from health facility, family or community support. The findings indicate that having uninterrupted clinical care together with social support services gives motivation to consistently utilize the services without stopping in addition to self-comforted.

Having a supportive family member who supports the individual living with HIV/AIDS find comfort, love and warmth they require to remain in care without getting lost to follow-up. Previous study also found that family support encompasses all the measures taken by the family members to meet the health care needs of their loved ones with minimal discrimination (Januraga *et al.,* 2018). This has been found to significantly contribute to the increased use of HIV treatment and improvement on the standard of care for the adult clients living with HIV/AIDS.

2.3.2.2 Community HIV care support

Bassett *et al.*,(2022), acknowledged the community health support as a successful strategy for managing HIV/AIDS disease by enhancing health care delivery, and promoting socioeconomic development (Bassett *et al.,* 2022). Besides, the community health promotion approach was a component of discussion as foundation pillar for PHC during the Alma Ata Conference in 1978.

Members of the population that a health center serves make up the community. These persons might already be HIV-positive and enrolled in a chronic HIV care center, or they might not have the virus but be prepared to support and enhance the provision of high-quality HIV/AIDS care support in their neighborhood (W. H. O. WHO, 2008a).

Furthermore, the available literature classifies the community's support for HIV-positive individuals as official or informal, with the main goal being the promotion of health through the use of existing resources (W. H. O. WHO, 2008b). In the first place, formal community support refers to the assistance that people with HIV/AIDS receive from religious institutions, non-profit groups, and community health volunteers. Additionally,

the formal forms of assistance for those living with HIV/AIDS include the Dots strategy for the management of tuberculosis, peer outreach to high-risk individuals, as well as home-based care.

In the case of the PLWHA-founded support groups, they include those who support the client's therapy, as well as their friends and family, are examples of informal supports within the community infrastructure (W. H. O. WHO, 2008b).

2.3.2.3 Peer Support

According to Doull *et al.*,(2017), a peer is someone who shares traits such as age, sex, or disease status with the supported person, enabling the peer to relate to and empathize with the person on a level that a non-peer would not be able to (Doull *et al.,* 2017). As a result, peer support has the ability to diminish feelings of loneliness and isolation, disseminate knowledge, and encourage actions that enhance one's own health, well-being, and health practices.

Nonetheless, peer support for HIV/AIDS patients was initially proposed in the 1980s when a group of patients first got together to promote better medical care and treatment. They assisted one another in overcoming challenges brought on by their HIV illness or negative medicine side effects (Positively, 2017). Overtime, Peer support has become a vital component of the care and assistance provided to those with HIV to enable uptake of care and treatment (Berg *et al.,* 2021).

Furthermore, Peer support combined with standard medical care is more effective than routine clinic follow-up in improving outcomes for persons living with HIV, according to a comprehensive analysis of the subject. It is a practical and successful strategy for connecting and keeping HIV-positive individuals in care, which can support already-existing services (Berg *et al.,* 2021). However, available literature has reported that the peer support focuses on the specific client in order to help that person link, adhere to treatment regimens, and support their continuous self-management of HIV/AIDS (Positively, 2017).

Several systematic reviews have further acknowledged that peer support is the fundamental addition to care and treatment for people living with HIV/AIDS (Dave et al., 2019). More specifically they suggest that every adult who has HIV should be a part of a peer support group that has been set up locally. Similarly, Fisher et al. (2018) found peer groups have a significant impact on reaching the PLWHA's healthcare priorities. In conclusion to ensure that all HIV clients are included, peer support mechanisms must be built in the communities to increase consistent utilization of HIV care and support services.

2.3.3 Linkage with Care

Li et al. (2017) discovered that in order to improve the utilization of care, it is critical to better understand the factors that influence linkage to care among HIV-infected participants China. This implies that clients who are HIV-positive confront regionally specific contextual challenges that may make it more difficult for them to get effective linkage to HIV care and support services. The predisposing variables, such as the presence of specialized hospitals and the availability of counseling services, lead to the increased linkage to care and treatment.

According to other studies, factors related to the way healthcare is provided, personal perceptions, and sociodemographic situations are linked to late linkage to care. Further, mental health concerns also is identified as key determinants in access to care (Ahonkhai *et al.,* 2022; Fuge *et al.,* 2022). However, in this study contextual factors that influence linkage like social support were not explored.

2.3.4 Retention in Care

One of the main indicators of the effectiveness of HIV treatment is the patient's continued participation [retention] in antiretroviral therapy (ART) care. Retention in care thus increases compliance, which is essential for better treatment outcomes and the avoidance of medication resistance (Nimwesiga *et al.,* 2023).

In a previous study involving a thorough literature analysis was conducted to identify the variables influencing poor adult retention in HIV treatment therapy in developed and developing countries (Bulsara *et al.,* 2018). The most often reported predictors of poor retention in industrialized nations were active substance use and demographic factors. In

undeveloped countries, poor retention in treatment was most frequently attributed to physical health difficulties. The results of this review show that problems with physical and chemical dependency are the primary reasons for poor retention. It was also demonstrated that additional psychosocial factors, such as psychiatric illness and social/welfare concerns, were significant.

Similar research revealed that patient trust in healthcare professionals, self-efficacy, and HIV-related stigma influence the link between health literacy and both HIV treatment adherence and HIV care retention. The failure of HIV care systems and/or clinicians to provide inviting care environments, as well as factors such a lack of social support, isolation, and diagnosis disclosure are among other factors that contributes to low retention in HIV care (Mgbako *et al.,* 2022).

Furthermore, individual characteristics, such as the patient's psychological well-being, affected depressive symptoms and loss of adherence drive. Discrimination from many facets of the participant's social circle, including family, friends, neighbors, and religious groups, have a negative impact on the patient's retention and adherence to ART. Additionally, structural barriers to adherence and retention in care for ART include: food security, drug shortages and access issues (such as cost and distance) to the ART clinic (which affected retention in care)(Gabster *et al.,* 2022).

2.3.5 Treatment adherence

Adherence to treatment entails beginning HIV therapy, attending all scheduled visits, and taking HIV medications consistently and precisely as directed (also known as medication

adherence). Maintaining health for those with HIV depends on commitment to medication (Health, 2021).

The findings from previous literature highlight the negative effects of low household income, food insecurity, and depression on ART outcomes in rural settings that reduce the treatment adherence (Gumede *et al.,* 2023). Similarly, according to a study conducted in Northwest Ethiopia, factors that contributed to reduced adherence to HIV therapy included stigma or prejudice, missed appointments with the clinic, being treated for tuberculosis, and having a lower CD4 cell level (Zewude *et al.,* 2022). This suggests that the patient's health and treatment outcomes may be enhanced by acknowledging these aspects and using focused adherence support methods. However, this methods for support that are specific to the client needs were not clearly identified.

2.3.6 Satisfaction with Care and support services

The general well-being of PLWH depends on patient satisfaction and perceived quality of care, especially in terms of health professional competency, healthcare delivery, sufficient of resources and services, accessibility, and cost of care (Baleeta *et al.*, 2023).

Understanding patient satisfaction with medical treatments can aid in identifying unmet patient requirements and boosting treatment compliance. Following a recent study in Spain, the findings indicate that those participants with mental health issues, unstable housing, and unemployment felt less supported in managing their HIV (Burgui *et al.*, 2023). Contrary a study done in Japan found negative correlations between ART satisfaction and experiences of ART side-effects and High ART anxiety (Koga *et al.*, 2022). These findings show the need for monitoring patient satisfaction with HIV

treatment and the need to consider social and economic issues that may have an impact on health and vary in different regions.

2.4 The Attitude towards HIV/AIDS care and support services and their utilization

According to a study conducted in Northern Uganda, the majority of participants felt that their attitude towards receiving an HIV positive diagnosis and their families' support had an impact on their decision to keep up with their clinic visits (Nakate *et al.,* 2023). This suggest that the persistent way in which PLWHA think, their ideas, sentiments, or behavioral manifestations on social conditions can be used to illustrate their attitudes in the context of HIV use of care and support service. Similarly a study done in Nigeria, found that existence of poor attitude towards HIV status and medication contributed to low utilization of HIV treatments (Isika *et al.,* 2022).

Furthermore, a study conducted in Vietnam, Ishimaru et al. (2017) assert that the majority of nurses exhibit attitudes of unwillingness to care for the PLWHA. Likewise, other studies have documented that the working environment and religion contribute to the clients' tarnished image, making it more likely that others will not want to engage with them or the HIV-at-risk community. Therefore, these viewpoints on health workers, religious convictions and degrading experiences contribute to reducing utilization of care and support services among the PLWHA(Boakye et al., 2023)

Muslimin et al., (2022) asserts that attitudes affect a person's desire to use HIV treatment, care, and support services; for instance, attitudes affect a person's decision to take prescribed medications or visit a clinic. As a result, the person's attitudes reflect his ability to make wise judgments and to believe that he can control that health habit. According to Pettit et al., (2022), PLWHA use HIV treatment and care due to personal attitudes and

beliefs (Pettit et al., 2022). The majority of these ideas and attitudes that people have are explained by their level of education, religion, culture, or social standing in society. Likewise positive attitudes towards HIV/AIDS treatment has been associated with HIV acceptance, lower levels of depression to lower levels of shame (Minja *et al.*, 2019) .

Furthermore, attitudes have the power to positively or negatively impact a person's health behavior. It's regrettable that so many people do not understand that HIV/AIDS is a medical condition. Instead of being seen as a medical problem that calls for treatment and support, some people view HIV/AIDS as a moral issue (Parsons, 2022). Because people believe that HIV/AIDS is a humiliating condition, they don't seek care or treatment, and this lack of belief is reflected in how society describes and brands the disease (Foley et al., 2023) . Through interactions with our society and daily interactions, people develop a variety of attitudes (Goffman, 1963). New knowledge and experiences may alter it. According to numerous polls negative beliefs, attitudes, and discrimination exist everywhere in the world and are linked to poorer use of medical services (Chautrakarn et al., 2023; Kumar, 2023).

The majority of locals in places with few health care resources do not believe that HIV/AIDS actually exists, which results in poor health seeking behaviors or noncompliance with treatment recommendations (Gazimbi *et al.*, 2019; Nutor *et al.*, 2020; Yaya *et al.*, 2019). Comparatively to HIV-positive individuals who deny the reality of HIV/AIDS disease and the efficacy of HIV treatment and care, those who feel that HIV treatment, care, and support services boost their wellbeing tend to resolve to adhere to the treatment regimens (Pettit et al., 2022). These studies suggest that care providers should try to comprehend the client's opinions about the HIV/AIDS condition and their goal for

seeking medical attention in order to promote use of HIV treatment care and support services.

2.5 The Accessibility of HIV/AIDS care and support services on Utilization of the services

According to Ayon et al. (2018), there are a number of barriers that prevent PLWHA from getting HIV care and support services. These deterring elements include lack of privacy, long walks to clinics, racism, destitution, and being offered multiple return dates. Additionally, inadequate access to health services is a result of a lack of links to hospitals and a failure on the part of health professionals to understand the requirements of their PLWHA. Once the obstacles are not removed, the patients would cease using the HIV care services and frequently show up late to the clinic when the illness has advanced, which would have a negative impact on their health (Ayon *et al.,* 2018).

The term "late presentation" refers to those who arrive for HIV treatment after their CD4 count has dropped below 350 cells/l or after experiencing an AIDS-defining event (Roscoe *et al.,* 2019). Additionally, using HIV care and support services later in life is linked to higher patient morbidity and death as well as higher health care expenses. As a means of preventing the gaps in access to healthcare facilities, several researches have recommended the significance of offering home-based treatment (Larki *et al.,* 2020).

Previous research (Bono et al., 2023; Kang et al., 2022) has revealed differences in the accessibility and availability of HIV treatment, care, and support in different regions of the country, such as rural areas. Living in remote locations makes it difficult for PLWHA to access the scant or nonexistent HIV care services that are available. Health professionals who have not been sensitized to the most recent best practices for HIV care and treatment typically treat HIV-positive patients. Additionally, HIV patients are frequently discouraged from getting consistent care due to the long commutes to clinics in the absence of reliable transportation (Pope et al., 2022).

Due to competing obligations within the family, people with HIV/AIDS frequently miss clinic appointments. This includes managing a business, taking care of domestic animals' while being aware that there are HIV/AIDS care services available, and taking care of the aged, sick, or young. Additionally, factors like being away from home in search of employment, traveling a long distance and paying expensive transportation costs, being afraid of taking lifelong HIV medication and its side effects, and for some clients, not being able to afford care can all affect how easily accessible HIV care is (Roscoe *et al.*, 2019). These studies suggest that public access to HIV care and support services can be achieved through providing referral methods and ensuring equitable distribution throughout urban and rural areas. Regions must create healthcare facilities and ensure specialized services are accessible to all clients infected with HIV/AIDS.

2.6 The Stigma and Utilization of HIV/AIDS care and support services

Link and Phelan (2001) defined stigma as "a harmful societal phenomenon enabled by underlying social, political, and economic powers, labeling and linking differences into negative stereotypes, leading to a separation of "us" from "them," and ultimately leading to

status loss and discrimination for those with the trait." Stigma can be classified as perceived, experienced/enacted, and internalized (Bisenius et al., 2023). When there is a perception that a PLWHA may face prejudice or rejection once their HIV positive status has been communicated to them, this is known as perceived stigma. While actual or perceived stigma relates to the discrimination that PLWHA face for only having HIV, which prevents them from receiving their fundamental human rights, (Audet et al., 2013; Bisenius et al., 2023). Finally, Internalized stigma happens when persons who turns HIV positive develop a low self-esteem lacking confidence of who they are.

Prior to anything else, stigma and prejudice are the main reasons why PLWHA avoid using HIV/AIDS treatment facilities. Stigma and discrimination weaken the foundation for HIV treatment, care, and support initiatives when PLWHA feel afraid, averse, and discouraged to disclose their HIV status to the family or caregivers (Malama et al., 2022). In environments of extreme poverty, when treatment hurdles are common and social relationships may be necessary for survival, these mechanisms are particularly evident (Pambou et al., 2023). Besides Januraga *et al.,* (2018) found out that stigma has a negative correlation with patient's quality of life resulting from underutilization of treatment and care services for PLWHA (Ishimaru *et al.,* 2017).

It is well established that stigma and prejudice impede all facets of HIV/AIDS treatment, care, and support. Many myths and misconceptions about the HIV/AIDS disease itself, its therapies, particularly the recommended ARVs, exist in society. The effects of stigma and discrimination on PLWHA include stereotypes, prejudices, and poor social interactions. The PLWHA discontinue using HIV medicines because of hospital violations of patients' rights to privacy, confidentiality, and informed consent (UNAIDS, 2017).

The culture, family, or spouse may socially isolate the person who has received an HIV positive status diagnosis, according to Fauk et al. (2022). The rights of people who are HIV positive may be violated, including their right to education, their right to association, and their right to information from peers and the broader community. Finally, as a result, the person starts to feel worried, depressed, or violent. The reduced use of HIV treatment, care, and supportive services is a result of all of these expressions of stigma and prejudice in the families and from peers in society (Fauk et al., 2022)

2.7 Andersen's Behavioural Model

The Andersen (1968) Behavioral Model initially aimed to clarify the variables that influence how families use healthcare services and contributed to the development of laws that ensured equal access to healthcare (R. Andersen, 1968). Anderson (1995) recognizes that the model has since experienced four phases of change. The 1960s model's initial development, which asserts that the utilization of hospital treatments depends on a person's propensity, enabling environment, and personal characteristics, was phase one of the modification (R. Andersen, 1968).

In a second phase, Andersen and Newman modified Andersen's behavioral Model in the 1970s to incorporate the qualities of the health care system's performance that also encourage the use of healthcare. Consumer satisfaction was also added to show the clear results of using health services (R. M. Andersen, 1986). Perceived health status and evaluation were two outcomes of health care utilization that were introduced in the third modification phase. Additionally, it promoted the utilization of hospital services and individual participation in the promotion of health in the context of the outside environment (R. M. Andersen *et al.,* 1994). The integration of feedback loops that

involved identifying and addressing the clients' health needs occurred during the last stage of modification (Evans *et al.*, 2017).

The Andersen's Behavioral Model (1968) has undergone the three changes mentioned above, however the basic ideas behind this model have not changed. This is accomplished by realizing that the three elements of predisposition, enablement, and necessity determine how clinical care services are used (R. Andersen, 1968). Andersen noted that choosing to use healthcare services is a community decision in addition to an individual's or family's choice. Resources, structure, and a health care policy framework were listed as the components of a health care system. In turn, the resources were characterized as the quantity and caliber of labor and capital (R. Andersen *et al.*, 2005; R. M. Andersen, 1995). The Andersen Behavioral Model (ABM) has previously been used to describe human health related behaviors especially in regard to how enabling patient factors and clinical services accord to improved individual health for PLWHA (R. Andersen et al., 2000; Lin et al., 2020; Saint-Jean et al., 2011; Travers et al., 2020). Saint-Jean et al. (2011) used the Andersen's behavioral Model to identify characteristics that facilitate or restrict the use of healthcare services in their investigation on how PLWHA in Miami, Florida used high-quality, comprehensive clinical care. In order to look at questions of human behavior and resource availability, Riegle and Stewart (2013) used Andersen's behavioral model to analyze the relationship between poverty and usage of comprehensive clinical care. Similar to how studies on the usage of services by people in the social and health fields have widely embraced this methodology(Lederle et al., 2021).

It is thought that the most important factors influencing the use of HIV clinical care and support services are poor accessibility, lack of information, and negative attitudes toward

the quality of clinical services and caregivers. Thus, the Andersen Behavioral Model (ABM) was used in this study to investigate the individual, healthcare facility, and community factors influencing the use of Comprehensive Clinical Care services for adults living with HIV, including support services used by HIV-infected individuals in Baringo, i.e., predisposing, enabling factors, and needs.

2.8 Factors Influencing HIV Clinical Care and Support Services Utilization

The following factors are associated with HIV clinical care and support services use

2.8.1 Predisposing Factors

Predisposing factors, according to Andersen (1995), are those situations under which a person living with HIV/AIDS can choose to use clinical care and support services, even while search conditions do not always require their use. These risk factors offer a justification for requesting and continuously using healthcare services. Motivational variables, such as a person's values and attitudes toward using HIV care and support services, are examples of predisposing factors.

According to Koirala et al. (2017), there are numerous trends and medical care strategies for providing support and care to PLWHA in diverse healthcare settings and nations. These distinctive methods served as the foundation or risk factors for PLWHA retention in care across 7 countries in the Asia Pacific Region. The results also demonstrated that greater use of HIV care and support services is influenced by effective communication with PLWHA clients, knowledge of the available care and support services, and suitable referral systems. Similar to this, (Ogunbajo, 2016) discovered that the main contributors to

HIV patients' ability to remain on care and treatment are their want to live, the good impacts of treatment on their health, and strong social support.

Li et al. (2017) discovered that in order to improve the utilization of care, it is critical to improve the quality of counseling services provided to PLWHA, increase the quality and variety of supportive services, establish specialized hospitals, provide communal support and finances to the clients, and better understand the factors that influence linkage to care among HIV-infected participants in China. This implies that clients who are HIV-positive confront regionally specific contextual challenges that may make it more difficult for them to get effective HIV care and support services. The predisposing variables, such as the presence of specialized hospitals and the availability of counseling services, lead to the increased usage of treatment.

In conclusion, predisposing factors exist in all situations where individuals with HIV are present and can either encourage or dissuade one from seeking or continuing care and treatment. This component may be present in a variety of social and economic systems as well as at the individual level (Nyato *et al.*, 2019). Friendly services, the provision of confidential treatment, and non-stigmatizing attitudes from healthcare professionals are among the system-level factors predisposing the HIV/AIDS clients to the usage of services. Eliminating myths and misconceptions regarding HIV care and treatment may be a role at the social level, but individual variables that increase utilization of HIV care may include fear of dying after contracting a chronic illness. Hence, counseling and support services may help to lessen this dread.

2.8.1.1 Health Behavior

A health behavior, according to Cockerham (2014), is any action taken knowingly by a person living with HIV/AIDS with the express intention of enhancing their health. Health-related behaviours can have a direct impact on health outcomes. One's health could be negatively impacted by the habit in a number of ways. Healthy behaviours decrease the risk of conditions, as opposed to bad behaviours, which raise the risk of conditions.

Hence, as a result of the huge rise in the overall number of HIV/AIDS patients, there are a large number of long-term survivors with prolonged infectiousness. Among those who are HIV/AIDS positive, the significance of healthy behaviour cannot be emphasized (Xu *et al.,* 2020). This finding suggest that HIV infected adults should adopt a health behaviors consistent with the utilization of HIV care and treatment to stay health.

In this case the adult client with HIV/AIDS should look back on his past to identify potential causes of the condition and suggests methods to lessen those influences in order to keep optimal health by ceasing to engage in unhealthy habits. HIV-related health behaviours involve complex behaviours influenced from multiple levels, including an individual's knowledge, attitudes, emotions, and risk perception as well as power dynamics between partners, accessibility of services, economic inequalities, and policies that make HIV more prevalent in the community. Therefore, ignoring health-promoting behaviours in PLHIV can have a negative impact on quality of life and lead to serious health problems (Pashaeypoor *et al.,* 2023).

The majority of locals in places with few health care resources do not believe that HIV/AIDS actually exists, which results in poor health seeking behaviors or noncompliance with treatment recommendations (Gazimbi *et al.,* 2019; Nutor *et al.,* 2020;

Yaya *et al.,* 2019). Comparatively to HIV-positive individuals who deny the reality of HIV/AIDS disease and the efficacy of HIV treatment and care. Whereas those who feel that HIV treatment, care, and support services boost their wellbeing tend to resolve to adhere to the treatment regimens as a form of healthy behavior (Boateng et al., 2013; Pettit et al., 2022). These studies suggest that care providers should try to comprehend the client's opinions about the HIV/AIDS condition and their goal for seeking medical attention in order to promote use of HIV treatment care and support services.

In their search to identify the distinctive health behaviors that the PLWHA who received care and treatment exhibited, Xu et al. (2020) discovered that these people were more prone to problematic health behaviors like drinking alcohol, engaging in risky sexual behavior, and stopping the use of prescribed medications. Therefore, interventions concentrating on reducing the aforementioned harmful behaviors should be identified and made aware to every adult living with HIV/AIDS in order to improve the efficacy of HIV care, treatment, and support services utilization. In addition, according to Mazalovska et al. (2018), the success of HIV care, treatment, and support service utilization is closely correlated with the acquired skills and consistent maintenance of positive health seeking behaviors among persons with HIV.

2.8.2 Enabling Factors

According to Cho et al (2018), enabling factors are things that make it easier or harder for people living with HIV/AIDS to get care and support services depending on how readily available they are (Cho *et al.*, 2018). Determining which behaviors contribute to, or are otherwise connected with, a certain health concern is a necessary step in developing successful solutions to address it.

In their investigation into the enabling factors influencing the use of HIV care and treatment among female sex workers, Nyato et al. (2019) discovered that peer support networks, healthcare professionals with a positive attitude toward them, and transport were all necessary to encourage HIV intake. Similar to this, Bertakis et al. (2000) discovered that male gender was substantially more related with evading treatment than female gender, who was found to use more health services. Their study examined the impact of gender on the utilization of hospital services. Similar to the previous finding, this one indicated that women were more likely than males to employ prescribed treatment and care services.

Azia et al. (2016) acknowledge the existence of barriers to receiving HIV care and treatment, including but not limited to the high cost of care, the low quality of services, and traveling far distances to the medical facilities. The needs of HIV/AIDS patients who want to get medical care should be the main consideration when implementing enabling activities to overcome these barriers. Hence, in order to maximize the use of HIV care and treatment, patients with HIV/AIDS must have simple access to care, comfortable clinic visits, and the respect of their fundamental rights, such as privacy. Additionally, a New

York study on the retention of care for transgendered women found that linking services to the needs of the patient could significantly boost service use (Bockting *et al.,* 2020).

2.8.3 Need

Prior studies define need as a condition in which one needs something because it is necessary or extremely significant rather than just desirable (R. M. Andersen, 1995; Thompson *et al.,* 1995). Asymptomatic HIV-positive individuals frequently refuse to acknowledge their status. Therefore, these clients show less need for HIV treatment and support services and always follow through.

According to the existing literature, health care providers and peer educators highlight a lower perceived need for support and care among HIV-positive people worldwide. Clients who require less services subsequently decide to seek HIV care and assistance outside of the realm of traditional medicine, such as through the use of herbal remedies or traditional healers (Anywar et al., 2020)

In an investigation into the factors that influence PLWHA's decision to seek and adhere to anti-retroviral therapy at the JUTH Anti-Retroviral Therapy clinic, the researchers discovered that, of the 221 participants in the study, 80 (36.19%) had poor adherence to HIV care. The degree of education, living circumstances, occupation, and alcohol misuse were all found to considerably diminish the need for HIV therapies. These factors were connected with the need for HIV care. In order to avoid using the HIV care, treatment, and support services provided in the Comprehensive care clinics, clients with low perceived needs for conventional medication may opt for alternative kinds of medicine like traditional herbal medicine (Bezabhe *et al.,* 2016).

2.8.4 Utilization of HIV care and Support Services

Utilization of HIV care and support services refers to the thorough use of all medical services by individuals living with HIV/AIDS with the intention of maintaining health by living healthy lives, preventing illness, treating ailments that already exist, and being able to learn about the HIV infection for improved health outcomes and prognoses. Regular use of HIV care and therapy, obtaining sufficient supportive services, and PLWHA's good health and viral suppression all serve to minimize illness (Gandhi et al., 2023; Gardner et al., 2011). Substance abuse, socioeconomic deprivation (poverty, food insecurity, and homelessness), stigma associated with HIV disclosure, a lack of social support, worry about side effects, and the accessibility and quality of healthcare are all issues that might make it more difficult for people to utilize HIV care and support services (Arnold *et al.*, 2017).

A prior study on variables preventing PLWHA from receiving antiretroviral therapy in South Africa, found a number of obstacles that prevent persons living with HIV/AIDS from following HIV treatment regimens (Ivo, 2020). Likewise in another study at South Africa, key obstacles to utilization of HIV Treatment was associated with; stigma, disclosure, unemployment, inadequate nutrition, disability benefits, and other types of therapy were noted, while the patients largely criticized insufficient follow-ups and a lack of patient confidentiality (Azia et al., 2016; van Wyk et al., 2019). This signifies that, the health outcomes for the clients enrolled in care are being threatened by lapses in care, which is a subject of significant concern. In addition, stopping ART can accelerate the course of the disease and result in treatment failure.

2.9 Knowledge Gap

Several studies have been conducted on adults using HIV care services in Baringo, Kenya, sub-Saharan Africa, and globally. However, studies focused on the factors that affect people living with HIV in Baringo County's access to HIV/AIDS care and support services have largely been explored. Most studies have not reported on the care and support that older people use during research, threatening that changes to control the COVID-19 epidemic could affect HIV care and treatment. Current data reveal insufficient information about the care and behaviors related to HIV use and the needs of HIV-infected older people. Additionally, data shows that coverage and uptake of HIV services and support in Baringo County is still low.

Therefore, this study was done to explore factors influencing the utilization of HIV care and support services, evaluate the influence of accessibility and availability of care and support on the use of HIV services, and analyze the influence of accessibility, availability, attitudes, and discrimination on the utilization of HIV/AIDS care and support services. The findings of this study will add to the existing knowledge on factors that influence the utilization of HIV care and support among adults. In addition, it will provide an opportunity for policymakers and HIV program coordinators to initiate the most effective strategies to achieve 100% utilization rates and coverage of these HIV services.

CHAPTER THREE

METHODOLOGY

3.1 Overview

This chapter describes the methods used to conduct this research. It provides a description of the study design, setting, target population, and study variables. Information on the sampling techniques and procedures is provided. It goes further to clarify the basis for data collection and the data collection process. In addition, it describes data management and analysis techniques. Finally, the ethics of this study are explained.

3.2 Study Design

A cross-sectional analytic study design was employed with use of both qualitative and quantitative approaches to study participants who consented for a study. This study sought to gather data from a group of subjects at only one point in time. According to Schmidt and Brown (2019) the purpose of an analytic research is to measure the association between an exposure and a disease, a condition or outcome within a defined population. Since stigma, uptake of care, attitude, and accessibility were all important study population variables, this design was used to evaluate the relationship between HIV/AIDS care and support services utilization and these factors.

3.3 Study Area

The broader study area in which this study was conducted is at Baringo County, Kenya (Appendix 3). The County is located in the former Rift Valley Province and has an estimated area of 11,015.3 Km2 with 165 Km^2 covered by surface water. The county is classified as arid and semi-arid. The County is divided into 6 Sub-Counties, namely Baringo South, Mogotio, Eldama Ravine, Baringo Central, Baringo North and Tiaty.

Baringo County is home to 666,763 people (male - 50% and female - 50%), according to the 2019 National Census (KNBS, 2019a).

3.3.1 Socioeconomic and socio-cultural Background of Baringo county

Baringo County is among the marginalized counties in Kenya with a poverty incidence of 52.2% against 45.2% nationally and a contribution of 1.7% to the National poverty (KNBS, 2023). The county was inhabited by people of different ethnic groups with diverse cultural backgrounds. The main ethnic communities inhabiting Baringo County are the Tugen, Pokot and Ilchamus with minority groups such as the Endorois, Nubians, Ogiek, Kikuyu and Turkana. These communities mainly keep livestock, although the people living in highlands usually practice subsistence farming. Bee keeping and aloe vera plant cultivation are the emerging economic activities in Baringo County (BaringoGovernment, 2018).

3.3.2 HIV/ AIDS and Health status in Baringo county

HIV/AIDS was among the leading cause of morbidity and mortality in Baringo county with a prevalence of 2.6% in males and females at 4.3% (BCASP, 2015 – 2019a; KNBS, 2019b). It is worth noting that the County had an adequate number of health facilities (187). However, not all were able to provide comprehensive HIV-related services. There were 36 ART care and treatment sites and 96 PMTCT sites in the County. Further, HIV/AIDs care Services were provided at the designated comprehensive Care Centre clinics [CCC] across the county. However, the county experienced a perennial shortage of health personnel whereas, the vastness and terrain of the County, coupled with poor health seeking behavior hindered access and utilization of health services (BCASP, 2015 –

2019b). It's important to note that gender-based violence (GBV) and the county's ongoing insecurity caused health institutions to relocate or close and influence unhealthy behaviors. Hence this study was meant to investigate factors influencing utilization of HIV/AIDS care and support services by HIV-infected persons in Baringo County (BCASP, 2015 – 2019b).

HIV care and support services are provided by specialized outpatient Comprehensive Care Clinics situated in the sub-counties throughout Baringo County, which are funded by the county government and the U.S. Agency for International Development (USAID) Tujenge Jamii project. For treatment follow-ups, these clinics have about 5569 PLWHA registered (Baringo, 2023). One of the care and support services that is routinely offered is the delivery of ART medication, in addition to counseling, treatment for opportunistic infections, nutritional counseling, adherence support, and reproductive health services. Besides, hospital wards that accept inpatient patients usually offer internal medicine services.

A patient has to receive counseling before starting ART treatment. The patients then undergo a range of tests and examinations, one of which is a CD4 count. One month after ART is initiated, the first follow-up appointment is scheduled. During the first two days of treatment, patients are given buffer tablets. Thereafter, the next two appointments will be three months apart. Subsequently, the visits are arranged biannually. Aside from that, patients who miss a clinic appointment are contacted by adherence counselors within a fortnight of the scheduled visit date. Patients who exhibit missing appointments or who discontinue therapy on occasion are given extra-adherence counseling.

3.3.3 The Conflict Context

Cattle rustling in the county occurs more frequently and has always been attributed to resource-based conflicts, such as pastureland, population pressure, and climate variability. Climate change and resource scarcity drive inter-ethnic conflict, especially during drought. Arid and semi-arid areas are vulnerable to disasters caused by natural and human-induced hazards, including environmental degradation, floods, land degradation, landslides, conflicts, and diseases (Mutsotso, 2013).

3.4 Study Population

The study targeted all HIV-positive adults diagnosed in Baringo County and enrolled in Comprehensive Care Centers.

3.4.1 Inclusion Criteria

The study respondents who participated in this study were required to:

1. Be all clients enrolled for HIV Care and Support in comprehensive Care Clinics located in Baringo county
2. Be residents of Baringo County for at least 6 months
3. Be adults above 18 years of age
4. Consent to take part in this study

3.4.2 Exclusion Criteria

The study excluded participants who:

1. Are too sick to participate in the study based on self-report.
2. Are mentally ill

3.5 Sampling techniques and procedure

3.5.1 Primary Sampling unit

Four (4) sub counties (PSUs) for study were purposefully selected from the list involving all the six sub counties (clusters) available in Baringo county. Tiaty Sub-county was left out of the study due to active police operations against banditry during the study period. Likewise, because the pilot study was conducted in Mogotio sub-county it was also disregarded. Each health facility with a comprehensive care center available in the four sub counties selected was allocated a sample proportionate to the study sample size of 580 subjects as shown figure 3.1.

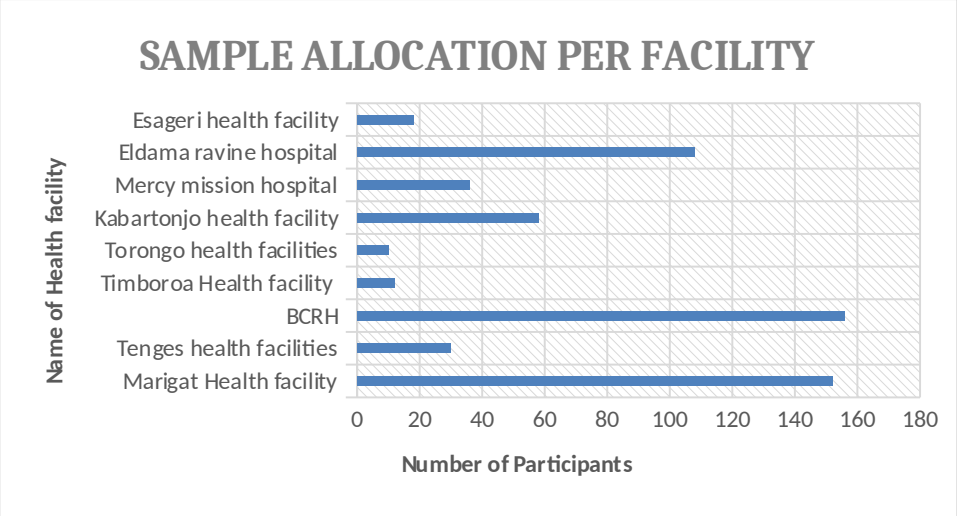


Figure 3.2: Bar Chart Showing Sample Allocation per subcounty

3.5.2 Listing of eligible adult HIV clients in a PSU

The list of all those PLWHA enrolled for care in each health center selected was used as a sampling frame. Subsequently, Systematic random sampling technique using random numbers was used to pick the first respondent from the sampling frame obtained from each health center followed by every 5th person from the group to ensure randomness until 580

respondents were picked. The community Health Volunteers were used to locate the households of the identified subjects and administer them with questionnaires.

3.5.3 Sample Size and Sample Size Determination

The quantitative sample size was determined using a formula by Fisher *et al.*, (1998) as shown:

$$n = \frac{D(z^2 pq)}{d^2}$$

Where:

n= Sample size

D=Design effect due to non-use of simple random sampling. This ranges between 1.5 – 2.0.

q = 1- p

Z=Standard Normal deviation (1.96 for a 95% confidence level)

P=the proportion of the population having the characteristic being measured i.e. 50%

d=the level of accuracy desired, or the sampling error (Often set at 0.05).

Thus;

$$n = \frac{1.5*(1.96)^2 (0.5)(0.5)}{0.05^2}$$

$$= \frac{1.5 \times 3.84 \times 0.25}{0.0025}$$

$$= 576$$

= Respondents 576

Since the population of adults with HIV Infection in Baringo County was less than 10,000 (adult population 15 years and above was 6000 (NACC, 2018); the sample size was adjusted using the formulae:

$$nf = n/1 + (n-1/N)$$

Where:

nf= the final sample size, when the population is < 10,000

n= the sample size of the populations of the 10,000 or more

N= the size of the total population from which the sample is drawn, Hence:

nf= 576/ [1+ (576-1/6000)]
nf = 526

To cater for non-response, an allowance of 10% (53) was added which translated to a sample size of 580 respondents.

3.6 Development of Research instrument

3.6.1 Data Collection Instrument

The study employed a survey questionnaire to collect data from the study participants. This was adopted from the 2015 Michigan Coordinated HIV/AIDS Needs Assessment Questionnaire and the 2013 Measuring HIV Stigma and Discrimination Among Health Facility Staff Questionnaire. The questionnaire was further modified, pretested and revised based on the study objectives and recent literature. The questionnaire was predominantly formatted with closed-ended questions; however, some questions offered the opportunity to add additional information for a more open-ended collection of information. In addition, the interviewer-administered data collection technique was employed to gather quantitative and qualitative data.

The Questionnaire had three sections with ninety (90) items:

1. Section A: Predisposing factors section with items on Social -Demographic Information Section, stigma and discrimination and attitudes toward HIV care and support services
2. Section B: Health needs section which consist items health and wellbeing status of client, linkage to care, treatment adherence and satisfaction with support services for HIV care.

3. Section C: Enabling factors section which contains items on Accessibility and availability of HIV care and support services

3.6.2 Validity of the Instrument

The adopted and modified Questionnaire was submitted to the university's allocated research supervisors and other lecturers at Masinde Muliro University to validate the face and content value of the questionnaire before it was used for the study. The items deemed inadequate or not necessary were eliminated or restructured to be aligned with the study objectives. The final draft of the study questionnaire was the outcome of all the modifications made.

3.6.3 Reliability of the instrument

The degree of reliability for this researcher developed questionnaire was determined by the test-retest method. Using the test-retest technique, the questionnaire was administered to fifty HIV (50) Clients attending HIV care and support in Mogotio subcounty. Within a period of two weeks interval, the instrument was administered again to the same Clients. Subsequently, the test-retest scores were analyzed using the Pearson’s product moment correlation (r) and the coefficient of statistics reliability determined. A Pearson correlation between the original and re-test scores was 0.89 ($p<0.001$) indicating the instrument's high level of reliability. This led to the determination of reliability of this instrument.

3.7 Data collection procedure

The data was collected using an interviewer-administered questionnaire from the consenting HIV-infected adults receiving HIV care and support services enrolled in the sampled comprehensive Care Centers. The researcher was assisted by six research

assistants who were trained on the instrument and the process of data collection from comprehensive care centers located within the sub counties they resided in. The chief researcher was involved in checking the data collection instrument once it has been filled to determine if it's complete and address any relevant questions arising Immediately. In total, 580 questionnaires were administered; however, only 519 questionnaires were duly completed and returned, with a return rate of 89%.

3.8 Data Management

Data cleansing began as soon as the data had been gathered. The researcher started by going over all of the data gathering tools to make sure that the information was accurate, thorough, and correctly recorded. All the questionnaires were assembled the night before each data collecting day, and a folder was used for safe storage. Before the results were tallied, the chief researcher reviewed each questionnaire to make sure it was complete before it was tallied.

3.9 Data Analysis

Once tallying was completed, the process of data analysis to determine useful information and conclusions was commenced. The process of analysis involved both quantitative and qualitative approaches. First quantitative data was coded, cleaned and entered in a computer for storage and back up mechanism instituted in flash disks. All the information related to individual members was identified and excluded from the records entered into a computer database.

Data analysis was done using SPSS Version 27. To provide a profile of the clients, frequencies, mean, range, and standard deviations for data were computed. To compare categorical independent variables with the main outcome (utilization of HIV care and

support services) Inferential statistics [univariable and Bivariate] analysis was done at A P-value<0.05, being considered significant for all the objectives. Secondly, the key qualitative information (data) gathered was analyzed by the researcher using various emerging themes

3.10 Ethical Considerations

3.10.1 Ethical clearance

The proposal for the study was submitted to the ethical review committee on research at Masinde Muliro University for approval (Appendix 5). Thereafter, research authorization was sought from National Commission for Science, Technology and Innovation (NACOSTI) (Appendix 7) before data collection began. Clearance from county government of Baringo was sought from the county department of health (Appendix 6) in order to conduct the study and in health facility level approval was sought from Medical Superintendent of the health facility sampled.

3.10.2 Informed consent

Participants were informed of the study's objectives and given the choice to participate or not. They were respected and assured of no mistreatment. No pressure was applied, and participants were informed that there were no risks involved or advantages. They had the right to terminate without penalty. All participants were asked to provided written consent.

3.10.3 Confidentiality

The study strictly adhered to ethical principles of confidentiality and privacy, ensuring all respondent information was kept secret and anonymous. Questionnaires were assigned

identification numbers, and participants were interviewed separately. A password was used to protect the database, and only the chief researcher had access to the information.

CHAPTER FOUR

RESULTS

4.0 Overview

The chapter presents the study's findings together with participant socio-demographic data such as age, gender, marital status, and educational attainment. Results on the uptake of care and support services for People Living with HIV/AIDS are presented in four areas: linkage to care, retention in care, treatment adherence, satisfaction with care and HIV support services. The chapter moves on to the results of the attitude survey on HIV/AIDS care and support services and their accessibility and availability. The last section of the chapter encompasses the findings about stigma and discrimination.

4.1 Socio-Demographic Information

A total of 519 out of a sample size of 580 took part in the study giving a response rate of 89.5%. As shown in Table 4.1, more than half of the participants (53.8%) were females nearly a third (31.2%) being aged 35 – 44 years. The mean age was 41.4 with an SD of ± 15.0 and ranging from 15 – 84 years. Most of the participants were married (59.3%), had attained secondary education (44.5%), and were Protestants (41.4%).

Table 4.1: Socio-Demographic Characteristics

Variable	Categories	n	%
Gender	Male	240	46.2
	Female	279	53.8
Age group in years	18 - 24	47	9.1
	25 - 34	124	23.9
	35 - 44	162	31.2
	45 - 54	98	18.9
	≥ 55	88	17.0
Mean age ± SD (Range) in years		41.4 ± 13.1 (15.0 – 84.0)	
Marital status	Married	308	59.3
	Single	97	18.7
	Divorced	47	9.1
	Widow	67	12.9
Level of education	None	55	10.6
	Primary	109	21.0
	Secondary	231	44.5
	College/University	124	23.9
Religion	Atheist	64	12.3
	Muslim	43	8.39
	Catholic	197	38.0
	Protestant	215	41.4

4.2 Socio-Economic Characteristics

Table 4.2 presents socio-economic characteristics of the study participants. Results on place of residence reveal that most of them were from rural area (40.1%), were of Tugen tribe (53.0%), were engaged in formal employment (23.1%) or business (24.7%) and supporting between 4 – 6 people on the monthly income (50.9%). Almost half (47.4%) earned between KSh. 3,001 – 9,999 per month.

Table 4.2: Socio-Economic Characteristics

Variable	Categories	n	%
Place of residence	Rural	208	40.1
	Urban	133	25.6
	Semi-urban	178	34.3
Ethnicity	Tugen	275	53.0
	Elchamus	55	10.6
	Pokot	81	15.6
	Endrois	21	4.1
	Other	87	16.8
Type of employment	Unemployed	105	20.2
	Employed	120	23.1
	Business	128	24.7
	Farming	143	27.6
	Student	23	4.4
Number of people supported by the monthly income	1 - 3	142	27.4
	4 - 6	264	50.9
	≥ 7	113	21.8
Average number supported by the income ± SD (Range)		4.9±2.4 (1 – 14)	
Average monthly income (KSh)	< 3,000	147	28.3
	3,001 – 9,999	246	47.4
	10,000 – 29,999	87	16.8
	≥ 30,000	39	7.5

4.3 Preliminary CD4 Count History

Results on CD4 count history are shown in Table 4.3. The average number of years since time diagnosed was 5 ranging from 0.1 – 30.4 years. Most reported the last CD4 cell count of between 200 – 499 (55.5%) and a mean of 370.2. Although 30.1% could not remember their lowest CD4 count ever recorded, 27.4% reported a low range of between 200 – 499.

Table 4.3: CD4 Count History

Variable	Categories	n	%
Average number of years after being diagnosed with HIV ± SD (Range)		5.0 ± 5.0 (0.1 – 30.4)	
Last CD4 cell count (cells/mm^3)	< 200	78	20.1
	200 - 499	216	55.5
	≥ 500	95	24.4
Mean last CD4 cell count ± SD (Range)		370.2 ± 213.9 (3.0 – 1202.0)	
Lowest CD4 count ever (cells/mm^3)	0 - 99	71	13.7
	100 – 199	96	18.5
	200 – 499	142	27.4
	≥ 500	54	10.4
	Don't know	156	30.1

4.4 Health Needs

The study assessed health needs of the study participants (Table 4.4). Less than half (46.6%) reported their health status as excellent. Less than one in five (18.9%) revealed that they were limited in carrying out moderate activities like moving table, house cleaning or daily activities or walking to work (19.1%). Majority (94.0%) had problems to accomplish regular daily activities due to emotional problems or doing work or other activities less carefully than usual (92.5%) a little of the time. Half (50.1%) reported that pain interfere with normal work during the past 4 weeks at all. Most of them (70.3%) during the past 4 weeks, felt calm and peaceful with 69.0% stating that had a lot of energy. Majority (93.8%) felt downhearted and depressed a little of the time over the same period of time. Equally, 92.3% reported that their barely physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, or clinic, etc.).

Table 4.4: Health Needs

Variable	Categories	n	%
Current health status rating	Excellent	242	46.6
	Fair	277	53.4
Moderate activities like moving table, house cleaning or daily activities	Yes, limited a lot	98	18.9
	No, not limited at all	421	81.1
Walking to work	Yes, limited a lot	99	19.1
	No, not limited at all	420	80.9
Amount of time had problems to accomplish regular daily activities due to emotional problems	All of the time	31	6.0
	A little of the time	488	94.0
Amount of time had problems doing work or other activities less carefully than usual	All of the time	39	7.5
	A little of the time	480	92.5
How much did pain interfere with normal work during the past 4 weeks	Not at all	260	50.1
	Extremely	259	49.9
During the past 4 weeks, have you felt calm and peaceful?	All of the time	365	70.3
	A little of the time	154	29.7
During the past 4 weeks, did you have a lot of energy?	All of the time	358	69.0
	A little of the time	161	31.0
During the past 4 weeks, have you felt downhearted and depressed?	All of the time	32	6.2
	A little of the time	487	93.8
During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, or clinic etc.	All of the time	40	7.7
	A little of the time	479	92.3

4.5 Objective 1: Uptake of HIV/AIDS care and support services among the HIV infected adults in Baringo County

Uptake of HIV/AIDS care and support services among the study participants was examined in four areas, namely: linkage to care, retention to care, treatment adherence, satisfaction with care and HIV support care.

4.5.1 Linkage to care

The results of the study showed that 46.6% had their first doctor's visit within three months, and a smaller proportion (8.5%) waited longer than a year. However, most of them reported that it was difficult seeing a doctor, nurse or other health care worker for

HIV medical care the first time after they tested positive with most of them blaming stigma (32.6%) and accepting their status (23.3%). In their view, counselling and disclosure (21.2%) and treatment follow-ups (17.9%) are important and should be done for people to get care (Table 4.5).

Table 4.5: Linkage to care

Variable	Categories	n	%
After how long did you first see a doctor	less than 3 months	242	46.6
	4 to 6 months	92	17.7
	7 months to 1 year	141	27.2
	more than a year	44	8.5
How easy or difficult was it for you to see a doctor, nurse or other health care worker for HIV medical care the first time after you tested positive	Very difficult	377	72.6
	Very easy	142	27.4
What made it difficult to get care	Stigmatization	123	32.6
	Accepting my status	88	23.3
	Accepting my status AIDS being a killer disease	51	13.5
	Unavailability of care and treatment	30	8.0
	I fear taking medication for long	23	6.1
	I had never disclosed my status to my partner	18	4.8
	health facility inaccessible	22	5.8
	Other specify	22	5.8
What important things should be done for people to get care	Through counseling and disclosure to partner	110	21.2
	Treatment follow-ups	93	17.9
	Availability of testing services ARVs	75	14.4
	Availability of ARVs and patient follow up	59	11.4
	Adhering to counselling and medication	47	9.1
	Provide services near the people	22	4.2
	Shorten next appointment time	20	3.8
	provide counselling	32	6.2
	Others	61	11.7

4.5.2 Retention to care

As reported in Table 4.6, majority said that it is very easy to see a doctor now (90.9%). In spite of that, increase of transport charges makes it difficult to get HIV medical care now (72.3%) though a higher proportion of 45.7% and 39.1% said that what helps them get HIV medical care now are the availability of ARVs and support from their partners, respectively. Thirty percent claimed that there had been a time they did not see a doctor for more than 6 months with 42.0% starting getting medication after stopping. What mostly helped with the reconnection to medical care was home visits by HCWs (61.9%). In their opinion, accessibility and availability of services (45.3%) and adherence counselling (38.1%) are very important in helping someone continue with medication without stopping.

Table 4.6: Retention to care

Variable	Categories	n	%
How easy or difficult is it for you to see a doctor now	Very difficult	47	9.1
	Very easy	472	90.9
What makes it difficult to get HIV medical care now	Increase of transport charges	375	72.3
	stigmatization	13	27.7
What helps you get HIV medical care now	ARVs are available	237	45.7
	Support from my partner	203	39.1
	Support from HCW and other support groups	66	12.7
	Others (financial support, Sent as Parcel, free care)	13	2.5
Has there been a time you did not see a doctor for more than 6 months	Yes	156	30.1
	No	363	69.9
Did you start getting medication after stopping	Yes	218	42.0
	No	301	58.0
What helped you most to reconnect to medical care	Health deterioration	21	9.6
	Home visits by HCW	135	61.9
	support from family member or treatment supporter	62	28.4
What important things should be done to help someone continue with medication without	Accessibility and availability of services	235	45.3
	adherence to counselling	198	38.1
	group or family support, enroll early in support groups	86	16.6

stopping

4.5.3 Treatment adherence

Table 4.7 presents study findings on treatment adherence. Most of the respondents (72.6%) had not skipped taking medication apart from being told to do so by a doctor with more than half (58.6%) stating that it was easy to take all your medication without skipping or missing. Nearly a third (32.9%) said that ART side effects, pill size, number of pills, time make it difficult to take medication without skipping. Alarm setting (24.1%) and treatment/partner supporters (18.7%) are very important in helping them take their medication without skipping.

Table 4.7: Treatment adherence

Variable	Categories	n	%
Have you skipped taking medication apart from being told to do so by a doctor	Yes	142	27.4
	No	377	72.6
How easy or difficult is it to take all your medication without skipping or missing	Very difficult	215	41.4
	Very easy	304	58.6
What makes it difficult to take medication without skipping	ART side effects, pill size, number of pills, time	171	32.9
	Stigma when with family members	55	10.6
	high viral load detection	18	3.5
	when travelling away from home	71	13.7
	Not difficult	204	39.3
What are the important things that help you take your medication without skipping	Good adherence and counseling	81	15.6
	Viral load suppression	52	10.0
	alarm setting and setting routine time for taking pills	125	24.1
	few pill side effects and low pill count	75	14.4
	need to be healthy	89	17.1
	treatment and partners supporters	97	18.7

4.5.4 Satisfaction with Care

Table 4.8 shows results of respondents' views on satisfaction with care. A higher proportion recommended improving on available services, employing of more staff (43.0%) and the need to counsel clients and family to reduce stigma (23.5%). Most of them received health care services from Marigat health center (27.3%) and BCRH (22.3%), majority (98.5%) having visited the facilities within the last 7 days prior to the interview date. More than a third (35.6%) attended the health facility because of its proximity while 21.5% did so because they do not want to be recognized.

In the last 6 months, 39.3% had ever visited the health facility. Thus, prevalence of utilization of HIV/AIDS health care and support services was taken to be 39.3%. Those who went but did not receive the services complained of the long wait (32.0%) and provider not being available (43.7%).

Table 4.8: Satisfaction with Care

Variable	Categories	n	%
What change would you bring to improve services for individuals living with HIV	Counsel clients and family to reduce stigma and discrimination	122	23.5
	Improve on availability of services, employ more staff	223	43.0
	Provide transport, financial support and food	79	15.2
	Take services to rural and establish community ART	95	18.3
Which health facility do you receive health services	Marigat Health facility	141	27.2
	BCRH	132	25.4
	Tenges, Timboroa, Torongo health facilities	52	10.0
	Kabartonjo health facility	40	7.7
	Mercy mission hospital	36	6.9
	Eldama ravine hospital	32	6.2
	Esageri health facility	33	6.4
	Other health facilities	53	10.2
Last time visited the facility	Within the last 7 days	194	98.5
	More than a week ago	1	0.5
	More than one month ago	2	1.0
Do you know of any other facility	Yes	477	91.9
	No	37	7.1
	Don't know	5	1.0
Why I go to my usual health facility	It is closer	283	35.6
	So, no one recognizes me	171	21.5
	I prefer the services offered	216	27.1
	Transport is easier	111	13.9
	Other	15	1.9
In the last 6 months have you ever visited the health facility and not received services	Yes	204	39.3
	No	315	60.7
The reason you could not receive services at the health facility	Long Wait	66	32.0
	Provider was not available	90	43.7
	Medications were not available	23	11.2
	Other	27	13.1
Is it safer to use traditional remedies/ medicines than HIV medicines	Yes	31	6.0
	No	488	94.0

4.5.5 HIV Support and care

With regard to HIV support and care (Table 4.9), 62.6% had ever received help from someone whose job is to assist you with things you may have needed to take care of your HIV, like finding a doctor, transportation, food. More than a third (36.9%) received such help less than 3 months after testing positive did you get someone to help and 48.4% said it is important for someone who first tests positive to be sensitized on support services and follow ups. More than half (57.0%) reported that they do not have any community services to support HIV/AIDS.

Concerning where they can get HIV information, 58.6% said they are okay with the church with the majority (75.3%) confirming that there are barriers to receiving support from the community. Mostly, they want provision of quality, accessible and integrated service (58.8%) with a comparable proportion (54.5%) confirming that home-based care is good as it improves accessibility and reduces transport cost. Among the married, 64.4% revealed that their partners know you are taking ART though 48.7% attested that it is difficult to take ART when a family member is watching.

Table 4.9: HIV Support and care

Variable	Categories	n	%
Have you ever got help from someone whose job is to assist you with things you may have needed to take care of your HIV, like finding a doctor, transportation, food?	Yes	325	62.6
	No	194	37.4
How long after testing positive did you get someone to help	Less than 3 months	120	36.9
	4 – 6 months	72	22.1
	6 months to 1 year	95	29.2
	More than 1 year	38	11.7
What things are important for someone who first tests positive	sensitization on support services and follow ups	251	48.4
	Confidentiality and disclosure to concerned	145	27.9
	Counselling	61	11.7
	Accessibility of ARVs	62	11.9
Are there any community services to support HIV/AIDS	Yes	223	43.0
	No	296	57.0
How would you feel about getting info in church	Yes, I would be okay with it	304	58.6
	No, I would not be okay with	195	37.6
	I don't go to church/place of worship	20	3.8
Are there barriers to receiving support from your community	Yes	391	75.3
	No	128	24.7
What are your recommendations regarding areas of HIV support to be provided	Provide quality, accessible and integrated service	305	58.8
	Transport and nutritional services	120	23.1
	psychological counselling to reduce stigma	94	18.1
Do you prefer home based care instead of regular visit?	Yes, HBC improves accessibility and reduces transport cost	283	54.5
	No because of increased stigma as my status will be known	236	45.5
If married, does your partner know you are taking ART?	Yes	255	64.4
	No	119	30.0
	I don't know	22	5.6
Is it difficult to take ART when a family member is watching?	Yes	253	48.7
	No	266	51.3

4.6 Objective 2: Attitude towards HIV Care and Support Services

Table 4.10 shows results on participants' attitude towards HIV care and support. More than one third (36.0%) said that compared to other Illness, HIV/AIDS is Not very serious. Majority (80.0%) do not know what HIV/AIDS services or treatment available to them. Besides, 90.6% take HIV Medication and other treatments as prescribed to prolong their life. Only a small proportion (14.1%) agreed that taking HIV treatments interferes a great deal with my normal activities or that side effects of medication are unbearable (20.4%). Asked about whether they fear taking ARVs because their spouses/partners would be angry, 77.1% agreed. However, 85.7% disagreed that HIV treatment will work more effectively only when they are feeling bad while 85.0% said that they have a responsibility to adhere to the treatment, care and support schedules. Forty-four percent agreed that it is a hassle to use HIV treatment and support services with 56.6% agreeing that the long-distance aspects to the clinics make the HIV care unpleasant. An overwhelming majority (92.1%) agreed that people on consistent uptake of HIV care and supportive services have improved health outcomes allowing them to live long. Likewise, those having regular visits to an HIV care provider and consistent uptake of HIV medical and supportive care leads to improved health outcomes (94.6%).

Table 4.10: Attitude towards HIV Care and Support Services

Variable	Categories	n	%
Compared to other Illness, HIV/AIDS is Not very serious	Agree	187	36.0
	Disagree	332	64.0
I do Not Know what HIV/AIDS services or treatment available to me	Agree	415	80.0
	Disagree	104	20.0
Taking HIV Medication and other treatments as prescribed can prolong my life	Agree	470	90.6
	Disagree	49	9.4
Taking HIV treatments interferes a great deal with my normal activities	Agree	73	14.1
	Disagree	446	85.9
Side effects of medication are unbearable	Agree	106	20.4
	Disagree	413	79.6
I'm afraid to take ARVs because my spouse/ partner would be angry?	Agree	400	77.1
	Disagree	119	22.9
HIV treatment will work more effectively only when I'm feeling bad	Agree	74	14.3
	Disagree	445	85.7
I have a responsibility to adhere to the treatment, care and support schedules.	Agree	441	85.0
	Disagree	78	15.0
It is a hassle to use HIV treatment and support services	Agree	229	44.1
	Disagree	290	55.9
The long-distance aspects to the clinics make the HIV care unpleasant.	Agree	294	56.6
	Disagree	225	43.4
People on consistent uptake of HIV care and supportive services have improved health outcomes allowing them to live long	Agree	478	92.1
	Disagree	41	7.9
Having regular visits to an HIV care provider and consistent uptake of HIV medical and supportive care leads to improved health outcomes	Agree	491	94.6
	Disagree	28	5.4

4.7 Objective 3: Accessibility of HIV care and support services

4.7.1 Accessibility of HIV Care and Support Services: Information about HIV health services

Table 4.11 illustrates results on participants' views on accessibility and availability of HIV care and support services with respect to information acquisition about HIV health services. Most of them (54.7%) visit the facilities between 4 – 6 months, 56.1% of whom use vehicles to travel. Mean travelling time in hours is 1.25. However, obtaining care services in the last six months has been very difficult to most of them (68.8%).

On acquisition of information about the services, 89.2% said that it was easy to find and easily accessible (79.4%) with a smaller proportion agreeing that is true for people with disabilities (37.2%). Such information is equally easy to understand (71.9%) and useful (90.7%) though transparency on financial costs is compromised (29.7%) to some extent.

Table 4.11: Accessibility of HIV Care and Support Services: Information about HIV health services

Variable	Categories	n	%
How often do you visit your clinic	One month or less	150	28.9
	Two months	85	16.4
	4 months - 6 months	284	54.7
Which mode of transport do you use when going for clinic	walking	42	8.1
	Boda Boda	186	35.8
	vehicle	291	56.1
Mean travel time in hours ± SD (Range)		1.25 ± 1.01 (0.08 – 8.00)	
How easy is it to obtain care services	Very difficult	357	68.8
	Very easy	162	31.2
Getting information about HIV care and support services			
Easy to find	Yes	463	89.2
	No	48	9.2
	Unsure	8	1.5
Easily accessible	Yes	412	79.4
	No	86	16.6
	Unsure	21	4.0
For people with disabilities	Yes	193	37.2
	No	246	47.4
	Unsure	80	15.4
Easy to understand	Yes	373	71.9
	No	132	25.4
	Unsure	14	2.7
Useful	Yes	471	90.7
	No	35	6.7
	Unsure	13	2.5
Transparent on the financial costs (out-of-pocket costs)	Yes	251	48.4
	No	154	29.7
	Unsure	114	22.0

4.7.2 Accessibility of HIV Care and Support Services: Experienced delays in accessing the following HIV health care services

Concerning delays in accessing HIV health care services (Table 4.12), less than half reported delays in accessing HIV medicines (19.1%), treatment interventions, surgery or other procedures (30.4%), tests (22.0%), getting an appointment with doctor/nurse (19.8%) or with a specialist (32.8%). The same was true of getting help from social services (41.4%).

Less than half (39.7%) need to go to another town to get the service they need, go to another region for service they need (22.7%), need a mobile to help you access health care service remotely (43.4%) or require transportation (48.0%).

Table 4.12: Accessibility of HIV Care and Support Services: Experienced delays in accessing the following HIV health care services

Variable	Categories	n	%
HIV medicines	Yes	99	19.1
	No	409	78.8
	Unsure	11	2.1
Treatment interventions, surgery or other procedures	Yes	158	30.4
	No	175	33.7
	Unsure	186	35.8
A test	Yes	114	22.0
	No	374	72.1
	Unsure	31	6.0
An appointment with doctor/nurse	Yes	103	19.8
	No	382	73.6
	Unsure	34	6.6
Appointment with specialist	Yes	170	32.8
	No	184	35.4
	Unsure	165	31.8
Help support from social services	Yes	215	41.4
	No	193	37.2
	Unsure	111	21.4
I need the following when seeking HIV care and treatment:			
I need to go to another town to get the service I need	Yes	206	39.7
	No	313	60.3
I need to go to another region for service I need	Yes	118	22.7
	No	401	77.3
A mobile to help you access health care service remotely	Yes	225	43.4
	No	294	56.6
Transportation	Yes	249	48.0
	No	270	52.0

4.8 Objective 4: Association between stigma and Utilization of HIV/AIDS care and support services

Table 4.13 shows results on participants' views on stigma and discrimination on HIV care and support services. Results show that less than half observed healthcare workers unwilling to care or treat a patient living with or thought to be living with HIV (15.2%), healthcare workers providing poorer quality of care to a patient living with or thought to be

living with HIV, relative to other patients (14.8%), health workers talking badly about people living with or thought to be living with HIV who are seeking care and treatment in the health facility (17.5%), health care workers neglecting people living with HIV seeking treatment because of their HIV status (12.1%) or disclosing the HIV status of a person living with HIV to others without his/her consent (17.0%). Only 8.9% reported having been denied health services, because of your HIV status in the last 6 months.

Table 4.13: Stigma and discrimination

Variable	Categories	n	%
Frequency of observing the following in a health facility that I attend for care and treatment			
Healthcare workers unwilling to care or treat a patient living with or thought to be living with HIV	At least once	79	15.2
	Never	440	84.8
Healthcare workers providing poorer quality of care to a patient living with or thought to be living with HIV, relative to other patients	At least once	77	14.8
	Never	442	85.2
Healthcare workers talking badly about people living with or thought to be living with HIV who are seeking care and treatment in the health facility	At least once	91	17.5
	Never	428	82.5
Health care workers neglecting people living with HIV seeking treatment because of their HIV status	At least once	63	12.1
	Never	456	87.9
Disclosing the HIV status of a person living with HIV to others without his/her consent?	At least once	88	17.0
	Never	431	83.0
In the last 6 months, how often have you been denied health services, because of your HIV status?	At least once	46	8.9
	Never, once or twice	473	91.1

4.8.1 Association between stigma and Utilization: Participants' feelings about HIV care and support services

Table 4.14 presents participants' feelings about HIV care and support services that they deserve. Majority (98.3%) agreed that they receive adequate HIV care and support from the comprehensive care clinic they are enrolled in with an equal majority agreeing that their health facility has guidelines to protect patients living with HIV from discrimination

(95.2%). On an equally positive note, a relatively smaller proportion agreed that people living with HIV feel ashamed of themselves attending HIV care clinic (59.5%), people think that having HIV is shameful and they should not be associated with them (41.2%), fear about how other people would respond if they see you attending HIV clinic make you hesitate to getting HIV care services (53.2%), people talk badly about you because you are enrolled for HIV care and treatment (41.6%), friends and family avoid you because you are enrolled for HIV care and treatment (27.6%) or colleagues avoid you because you attend comprehensive care Center for HIV treatment (28.9%).

Table 4.14: Stigma and discrimination: Participants' feelings about HIV care and support services

Variable	Categories	n	%
Description of feelings about the following statements			
I receive adequate HIV care and support from the comprehensive care clinic I'm enrolled	Agree	510	98.3
	Disagree	9	1.7
My health facility has guidelines to protect patients living with HIV from discrimination	Agree	494	95.2
	Disagree	25	4.8
People living with HIV feel ashamed of themselves attending HIV care clinic	Agree	309	59.5
	Disagree	210	40.5
People think that having HIV is shameful and they should not be associated with me	Agree	214	41.2
	Disagree	305	58.8
The fears about how other people would respond if they see you attending HIV clinic make you hesitate to getting HIV care services?	Agree	276	53.2
	Disagree	243	46.8
People talk badly about you because you are enrolled for HIV care and treatment?	Agree	216	41.6
	Disagree	303	58.4
Friends and family avoid you because you are enrolled for HIV care and treatment?	Agree	143	27.6
	Disagree	376	72.4
Colleagues avoid you because you attend comprehensive care Center for HIV treatment?	Agree	150	28.9
	Disagree	369	71.1

4.9 Association between socio-demographic characteristics of HIV Clients and utilization of the HIV care and support services

In order to examine the association between socio-demographic characteristics of HIV Clients and utilization of the HIV care and support services, bivariate analysis was performed on several independent variables with the outcome being having visited a health facility for HIV care and support services in the last 6 months (Table 4.15). From the results, atheists were 60% less likely to have utilized the services (OR: 0.4; 95% CI: 0.2 – 0.8; p = 0.006) the same way that 50% of those from rural areas were unlikely to have gone for the services (OR: 0.5; 95% CI: 0.4 – 0.7; p = 0.0006). The findings also reveal that those from the Tugen ethnic community were 20% less likely to have used the services (OR: 0.8; 95% CI: 0.4 – 0.9; p = 0.011). In contrast, participants earning monthly income of less than KSh. 10,000 were 2.5 times more likely to have utilized the services (OR:2.5; 95% CI: 1.6 – 4.0; p < 0.0001). Similarly, those with lowest CD4 count of less than 500 had higher odds of having used the services compared to those with higher CD4 counts (OR: 1.5; 95% CI: 1.0 – 2.1; p = 0.03), the results being statistically significant. Notably, the likelihood of using the services among those with education versus their counterparts with primary education and above was 1.7, with the association being marginally statistically significant (p = 0.06).

Table 4.15: Association between socio-demographic characteristics of HIV Clients and utilization of the HIV care and support services

Variable	Categories	n	Utilization of HIV Services		OR	95% CI	P value
			Yes	No			
Gender	Male	240	38.3	61.7	0.9	0.6 – 1.3	0.67
	Female	279	40.1	59.9			
Age group in years	≤ 30	116	36.2	63.8	0.8	0.6 – 1.3	0.44
	> 30	403	40.2	59.8			
Marital status	Married	308	38.6	61.4	0.9	0.6 – 1.3	0.71
	Not married	211	40.3	59.7			
Level of education	None	55	50.9	49.1	1.7	1.0 – 3.0	0.06
	Primary and above	464	37.9	62.1			
Religion	Atheists	64	23.4	76.6	0.4	0.2 – 0.8	0.006
	Christians / Muslims	455	41.5	58.5			
Residence	Rural	208	30.3	69.7	0.5	0.4 – 0.7	0.0006
	Urban / Peri -Urban	311	45.3	54.7			
Ethnicity	Tugen	275	34.2	65.8	0.8	0.4 – 0.9	0.011
	Other tribes	244	45.1	54.9			
Employment status	Unemployed	128	43.0	57.0	1.2	0.8 – 1.8	0.33
	Employed	391	38.1	61.9			
Monthly income (KSh)	< 10,000	393	44.3	55.7	2.5	1.6 – 4.0	< 0.0001
	≥ 10,000	126	23.8	76.2			
Number of people supported by the income	≤ 3	142	42.2	57.8	1.2	0.8 – 1.7	0.40
	> 3	377	38.2	61.8			
Number of years post HIV diagnosis	≤ 5	50	40.0	60.0	1.0	0.6 – 1.9	0.92
	> 5	469	39.2	60.8			
Last CD4 Count	≥ 500	95	44.2	55.8	1.3	0.8 – 2.0	0.28
	< 500	424	38.2	61.8			
Lowest CD4 Count ever	< 500	309	43.0	57.0	1.5	1.0 – 2.1	0.03
	≥ 500	210	33.8	66.2			

4.10 Association between health needs and utilization of the services

Table 4.16 present study findings on the association between participants' health needs and utilization of HIV care and support services. There was statistically significant association between cases where participants reported having a lot of limitation on performing moderate activities like moving table, house cleaning or daily activities (OR: 2.2; 95% CI: 1.4 – 3.5; p = 0.0004), limitation in walking to work (OR: 1.7; 95% CI: 1.1 –

2.6; p = 0.02) no pain interfere with normal work during the past 4 weeks (OR: 0.3; 95% CI: 0.2 – 0.4; p < 0.0001), feeling calm and peaceful in the last four weeks (OR: 0.6; 95% CI: 0.4 – 0.9; p = 0.02) and utilization of the services. Those who felt calm and peaceful and those who reported that pain did not interfere with normal work were less likely to have utilized the services in the health facilities.

Table 4.16: Association between health needs and utilization of the services

Variable	Categories	n	Utilization of HIV Services		OR	95% CI	P value
			Yes	No			
Current health status rating	Excellent	242	35.9	64.1	0.8	0.5 – 1.1	0.14
	Fair	277	42.2	57.8			
Moderate activities like moving table, house cleaning or daily activities	Yes, limited a lot	98	55.1	44.9	2.2	1.4 – 3.5	0.0004
	No, not limited at all	421	35.6	64.4			
Walking to work	Yes, limited a lot	99	49.5	50.5	1.7	1.1 – 2.6	0.02
	No, not limited at all	420	36.9	63.1			
How much did pain interfere with normal work during the past 4 weeks	Not at all	260	25.4	74.6	0.3	0.2 – 0.4	< 0.0001
	Extremely	259	53.3	46.7			
During the past 4 weeks, have you felt calm and peaceful?	All of the time	365	36.2	63.8	0.6	0.4 – 0.9	0.02
	A little of the time	154	46.7	53.3			

4.11 Association between attitude of HIV Clients towards HIV/AIDS care and Support services and utilization of the services

Table 4.17 presents bivariate analysis results on the Association between attitude of HIV Clients towards HIV/AIDS care and support services and utilization of the services. Participants who agreed that HIV/AIDS is not very serious, compared with other illnesses were 30% less likely to have utilized the services (OR: 0.7; 95% CI: 0.4 – 1.0; p = 0.03). Similar association was found between those who agreed that they do not know what HIV/AIDS services or treatment available to them and the use of the services (OR: 0.5; 95% CI: 0.3 – 0.8; p = 0.001) where 50% were unlikely to have utilized them. Participants who agreed that they were afraid to take ARVs because my spouse/ partner would be angry were 60% less likely to have utilized the services (OR: 0.4; 95% CI: 0.3 – 0.6; p < 0.0001) the same way that those who agreed that long-distance to the clinics made the HIV care unpleasant (OR: 0.4; 95% CI: 0.3 – 0.6; p < 0.0001).

Table 4.17: Association between attitude of HIV Clients towards HIV/AIDS care and Support services and utilization of the services

Variable	Categories	n	Utilization of HIV Services		OR	95% CI	P value
			Yes	No			
Compared to other Illness, HIV/AIDS is Not very serious	Agree	187	33.2	66.8	0.7	0.4 – 1.0	0.03
	Disagree	332	42.8	57.2			
I do Not Know what HIV/AIDS services or treatment available to me	Agree	415	35.9	64.1	0.5	0.3 - 0.8	0.001
	Disagree	104	52.9	47.1			
Taking HIV Medication and other treatments as prescribed can prolong my life	Agree	470	40.2	59.8	1.5	0.8 – 2.9	0.19
	Disagree	49	30.6	69.4			
I'm afraid to take ARVs because my spouse/ partner would be angry?	Agree	400	34.2	65.8	0.4	0.3 – 0.6	< 0.0001
	Disagree	119					
The long-distance aspects to the clinics make the HIV care unpleasant.	Agree	294	29.6	70.4	0.4	0.3 – 0.6	< 0.0001
	Disagree	225	52.0	48.0			
People on consistent uptake of HIV care and supportive services have improved health outcomes allowing them to live long	Agree	478	40.4	59.6	1.8	0.9 – 3.8	0.09
	Disagree	41	26.8	73.2			

4.12 Influence of accessibility to HIV/AIDS care and support services on utilization of the services among the HIV infected adults

Table 4.18 shows results on the influence of accessibility and availability of HIV/AIDS care and support services on utilization of the services among the HIV infected adults. There was statistically significant positive association between the following variables and the outcome: frequency of visiting the clinic (OR: 2.4; 95% CI: 1.6 – 3.6; $p < 0.0001$), accessing information about HIV medicines (OR: 3.1; 95% CI: 2.0 – 4.9; $p < 0.0001$), treatment interventions, surgery or other procedures (OR: 2.4; 95% CI: 1.7 – 3.6; $p < 0.0001$), a test (OR: 1.9; 95% CI: 1.3 – 2.9; $p = 0.002$), an appointment with a doctor/nurse (OR: 5.0; 95% CI: 3.1 – 8.0; $p < 0.0001$), a specialist (OR: 2.6; 95% CI: 1.8 – 3.8; $p < 0.0001$), help support from social services (OR: 2.5; 95% CI: 1.7 – 3.6; $p < 0.0001$), going to another town to get the service needed (OR: 1.5; 95% CI: 1.0 – 2.1; $p = 0.03$), going to another county to get the services needed (OR: 2.1; 95% CI: 1.4 – 3.2; $p = 0.0004$) and utilization of HIV care and support services with higher odds being reported in each case. On the other hand, those who found it very difficult to obtain care services were 70% less likely to have utilized them (OR: 0.3; 95% CI: 0.2 – 0.5; $p < 0.0001$). On the contrary, participants who could easily access information about HIV care services (OR: 0.4; 95% CI: 0.3 – 0.6; $p < 0.0001$) or such information for people with disabilities were less likely to utilize the services (OR: 0.6; 95% CI: 0.4 – 0.9; $p = 0.02$).

Table 4.18: Influence of accessibility and availability of HIV/AIDS care and support services on utilization of the services among the HIV infected adults

Variable	Categories	n	Utilization of HIV Services		OR	95% CI	P value
			Yes	No			
How often do you visit your clinic	≤ 1 month	150	54.7	45.3	2.4	1.6 – 3.6	< 0.0001
	2 months or more	369	33.1	66.9			
How easy is it to obtain care services	Very difficult	357	31.4	68.6	0.3	0.2 – 0.5	< 0.0001
	Very easy	162	56.8	43.2			
Information about HIV health care services							
Easily accessible	Yes	412	34.9	65.1	0.4	0.3 – 0.6	< 0.0001
	No	107	56.1	43.9			
For people with disabilities	Yes	193	32.6	67.4	0.6	0.4 – 0.9	0.02
	No	326	43.2	56.8			
In the past 6 months, I experienced delays in accessing the following HIV health care services:							
HIV medicines	Yes	99	61.6	38.4	3.1	2.0 – 4.9	< 0.0001
	No	420	34.1	65.9			
Treatment interventions, surgery or other procedures	Yes	158	54.4	45.6	2.4	1.7 – 3.6	< 0.0001
	No	361	32.7	67.3			
A test	Yes	114	51.7	48.3	1.9	1.3 – 2.9	0.002
	No	405	35.8	64.2			
An appointment with doc/nurse	Yes	103	69.9	30.1	5.0	3.1 – 8.0	< 0.0001
	No	416	31.7	68.3			
Appointment with specialist	Yes	170	54.7	45.3	2.6	1.8 – 3.8	< 0.0001
	No	349	31.8	68.2			
Help support from social services	Yes	215	52.1	47.9	2.5	1.7 - 3.6	< 0.0001
	No	304	30.3	69.7			
I need to go to another town to get the service I need	Yes	206	45.1	54.9	1.5	1.0 – 2.1	0.03
	No	313	35.5	64.5			
I need to go to another county to get the service I need	Yes	118	53.4	46.6	2.1	1.4 – 3.2	0.0004
	No	401	35.2	64.8			

4.13 Association between stigma and utilization of HIV/AIDS care and support services

Table 4.19, shows bivariate analysis results on Association between stigma and discrimination on utilization of HIV/AIDS care and support services. Two variable that are statistically significantly associated with the outcome of interest are those who agree that people with HIV feel ashamed of themselves to attend care clinics (OR: 0.4; 95% CI: 0.3 – 0.6; p < 0.0001) and that people think that having HIV is shameful and should not associate (OR: 0.4; 95% CI: 0.3 – 0.6; p < 0.0001). There was marginal statistically significant association between those who agreed that fears of how other people respond when attending clinic makes them hesitate to getting care services (OR: 0.7; 95% CI: 0.5 – 1.0; p = 0.06). In each case, the participants who agreed with the statements were less likely to have utilized the care services.

Table 4.19: Association between stigma and discrimination on utilization of HIV/AIDS care and support services

Variable	Categories	n	Utilization of HIV Services		OR	95% CI	P value
			Yes	No			
People with HIV feel ashamed of themselves to attend care clinics	Agree	309	30.7	69.3	0.4	0.3 – 0.6	< 0.0001
	Disagree	210	51.9	48.1			
People think that having HIV is shameful and should not associate	Agree	214	28.0	72.0	0.4	0.3 – 0.6	< 0.0001
	Disagree	305	47.2	52.8			
Fears of how other people respond when attending clinic makes one hesitate to getting care services	Agree	276	35.5	64.5	0.7	0.5 – 1.0	0.06
	Disagree	243	43.6	56.4			
People talk badly when one is enrolled for care	Agree	216	35.2	64.8	0.7	0.5 – 1.1	0.10
	Disagree	303	42.2	57.7			

treatment

CHAPTER FIVE

DISCUSSION

5.0 Overview

This chapter explains and analyzes the study's research questions and shows how they related to the body of current literature. The study also explores significance and applicability of this study analysis. Key findings about the socio-demographics, uptake, accessibility and use of care and support services for HIV/AIDS are discussed. The chapter also discusses the attitudes and stigma surrounding HIV/AIDS care and support.

5.1 Demographics and Utilization of HIV care and support services

The results of this study show that atheists were 60% less likely to have utilized the services ($p = 0.006$) the same way that 50% of those from rural areas were unlikely to have gone for the services ($p = 0.0006$) the results being statistically significant. Findings of this study concur with similar study in Pakistan which reported that rural residents were less likely to be taking ART and more likely to seek care later, which increases the likelihood of them having insufficient access to healthcare (Ahmed *et al.,* 2022). In contrary a study in North West Ethiopia discovered that religious fervor and medicine adherence were not substantially correlated with church attendance, prayer, and reading of the Bible or other religious texts (Kasahun *et al.,* 2022). What is different in the results of this study is that those who are religious could most likely have access to more information on available HIV care and support services than atheists.

5.2 Uptake of HIV care and Support services and Utilization

This study found an overall uptake of HIV care and support services of 50.7%. The study participants attributed the low uptake of HIV Care and support services among HIV infected adults in Baringo County to stigma (32.6%), denial (23.3%), long-distance, and the unavailability of community health services, which hindered the uptake of services. These results are consistent with the findings from a study done in Tanzania among female sexual Workers (FSWs) who failed to present themselves to clinics due to stigma and higher transport costs (Nyato *et al.,* 2019). This result suggested that although HIV treatment centers were available, uptake of care depended upon the contextual circumstances of where the client resides.

Before any other factor influencing HIV/AIDS care and support services uptake comes into play, People living with HIV/AIDS need to be aware of the existence of HIV care and support services available to them. In this study, the results indicate that the majority of participants (90.6%) expressed positive attitudes towards HIV care and support services. However, there was unfavorable utilization due to Low Knowledge of HIV/AIDS support and care services available to them ($p = 0.001$). These results are harmonious with the findings of a study in USA by Mayer *et al.,* on barriers to the wider use of Pre-exposure prophylaxis which reported low awareness and Knowledge as a key barrier to usage (Mayer *et al.,* 2020). In the same study, among healthcare providers who lack crucial knowledge on care and support services, it was found to directly impact prescribing rates. The study demonstrated that equipping both clients and health workers with knowledge of existing HIV care and support services is a key motivator for uptake. Whereas lack of

awareness or knowledge regarding HIV care deters most PLWHA from uptake of HIV care and support services.

The community should identify needs and give support to PLWHA. However, 296 (57%) the participants in this study were not able to recognize any support received from the community in which they reside. Contrary to this finding, Nyato et al. (2019) observed that peer-to-peer sharing of knowledge about HIV care services enabled by friendly health care providers, referrals, and peer educators created an increased demand for HIV care and support services among FSWs. Similarly, a recent study in Zimbabwe found that adolescents who participated in community adolescent treatment support programs improved linkage, retention, and wellbeing compared to adolescents who did not have access to search services (Willis *et al.,* 2019). The results above could be interpreted to mean that the diagnosis and commencement of treatment for an HIV-positive client are not enough to guarantee improved health. The ailment should be considered a social problem, and support services should play a key role in overcoming individualized challenges to the utilization of care and treatment.

Considering the hospital challenges, this study found that the clinics were not always open, especially during the holidays and weekends. Further, referrals to another facility or absence of test kits for CD4 counts lowered the uptake of HIV treatment and support services. To a lesser extent, 17% some participants felt that health workers talking badly about people living with or thought to be living with HIV were perceived to hinder the uptake the HIV care and treatment. Consistent with other studies, delaying the provision of care or unnecessary referral of PLWHIV to specialists services contributed to underutilization of services (Yuvaraj *et al.,* 2020). On the contrary, friendly healthcare

providers who warmly welcome clients into their facilities, treat them with courtesy, advise them on a variety of issues, sometimes provide financial assistance to the clients and are comfortable with HIV/AIDS clients were associated with increased use of services (Dapaah, 2016; Nyato *et al.,* 2019). These results suggest the need to improve the available services, handle clients with courtesy, and have periodic surveys to obtain prompt feedback on the services provided.

Besides providing HIV care and support services through comprehensive care centers and through referrals, community-based HIV care interventions are key to promoting the uptake of HIV care and support services (Willis *et al.,* 2019). As observed in this study, the analysis of the data shows that majority of adult clients (61.9%) infected with HIV/AIDS preferred home-based care instead of having to make regular clinical visits. Besides, a higher proportion of clients who reported to have stopped taking HIV care, found that the home visits done by community health workers helped majority of clients reconnect to HIV care after a period of stopping. This result is comparable with the previous literature showing that Home-based care providers were the reason for helping PLWHA reconnect with care through escorts to their health facilities, counseling services and the provision of ART Plus weekly phone calls and text messages (Mavhu *et al.,* 2020; Nyato *et al.,* 2019; Willis *et al.,* 2019). These studies suggested that community interventions, including home visits, home-based care providers, peer educators, home counsellors, and ARVS delivery to homes, will have a great impact on the uptake of HIV care and support services.

The findings of this study demonstrated the fear of taking antiretroviral treatments since it would cause the spouse or partners to become angry with them, which negatively slowed down utilization of care and support services. These findings are consistent with Leddy *et al.,* (2019) work that studied gender-based violence and engagement in biomedical HIV prevention, care and treatment. The study concluded that GBV impedes women's uptake of HIV care and treatment (Leddy *et al.,* 2019). Therefore, this finding can be interpreted to show that gender-based violence is a key deterrent to the utilization of HIV care and support services. Although more research is needed to address the frequency of gender-based violence and the utilization of HIV care and support services, these results highlight critical areas of support to improve the utilization of HIV care and treatment among adults diagnosed with HIV.

Further, the results of this study show that most participants (48.7%) found it difficult to take antiretroviral therapy while a family member was watching. This pattern of results is consistent with the previous study conducted in Malawi on factors influencing adherence to antiretroviral treatment among the adults (Chirambo *et al.,* 2019). Key to their finding was that the main reason for defaulting from antiretroviral therapy was fear of disclosing or being noticed taking the antiretroviral drugs. These findings underscore the need for privacy and confidentiality to promote the uptake of HIV care and treatment services. While counseling is done for the clients who turn out to be HIV positive, with equivalent effort, expanded counseling should be made to reach the close family members to attain family support in the uptake of care and support services (Chirambo *et al.,* 2019).

5.3 accessibility and utilization of HIV AIDS and care services

Accessibility to HIV care and support services affects the level of utilization by Adults living with HIV/AIDS. The results of this study highlight the aspects of long-distance travel to the clinics and the increase in transport charges, as observed by most of the participants (72.3%), that make accessing HIV care and treatment a leading barrier to utilizing the services. The majority of the clients required various means of transport to the clinic including motorbikes, Public service Vehicles, and personal cars. This finding is comparable to a study in Uganda that found how mobility and Poor transportation systems lead to the cancellation of trips to clinics by HIV infected clients (Tumwine *et al.,* 2019). However, these findings are contrary to the findings of a study in South Africa, which reported that social grants reduced transportation barriers to clinics when aging and poor health limited mobility (Schatz *et al.,* 2021). Thus, this finding suggests that support for transport costs and time out of work is needed for clients to visit hospitals. Alternatively, the HIV care centers should be closer to the client's homes to ensure easy access to treatment.

Although studies have shown that comprehensive care centers can improve the quality of care, they lack adequate staff, medications, equipment, and support services, making access difficult (Sidibé, 2015). Similarly, this study found that a higher proportion of clients (43.0%) recommended improvements to available services, including employing more staff for the treatment of HIV-infected clients. Also, the participants missed appointments at the clinics due to a lack of finances to pay for the additional treatments prescribed. Although studies have shown that the length of conformity to treatment sessions increases adherence to treatment in the general population (Hadaye *et al.,* 2020),

in this study, the adults living with HIV expressed concern and dismay about the regular hospital visits as they affect their working time. These findings point to the need for support to access prescribed additional treatments and limit hospital visits for stable clients to reduce their challenges of having regular hospital visits.

Interestingly, accessibility of HIV care can be deterred by both limited health care resources for HIV care and support services and poor health-seeking behaviors in rural areas. Thus, the cases of underutilization of care and support services might be higher than reported. The demographics in this study indicated that almost half of the respondents resided in rural areas. Nonetheless, the findings of this study show that, those clients who found it very difficult to access care services were 70% less likely to have utilized them. These findings are also in agreement with a survey done in the USA that demonstrated that disparities in HIV resources, staffing, literacy, coverage, and social marginalization contribute to underutilization of HIV care and support services (Sullivan *et al.*, 2021). This result suggests that enhancing clinical and community health care structures to improve quality and coverage of HIV/AIDS treatment is necessary, with outreach services having the most significant effect on utilization, which leads to positive health outcomes (Organization, 2008).

5.4 Stigma and Utilization of HIV/AIDS Care and Support services

Stigma and discrimination are, before anything else, the reasons as to why PLWHA avoid the utilization of HIV/AIDS treatment services (Katz *et al.*, 2013). The findings of this study reveal that the stigma associated with accessing HIV care had a statistically significant association between those who agreed that fears of how other people respond when attending clinic make them hesitate to get care services (OR: 0.7; 95% CI: o.5-1.0: p

= 0.06). This finding is congruent with a study done in Botswana, which found that perceived stigma and fear of unintended disclosure were the main Barriers to medication adherence. However, in the same study, contrary to this finding, support and home environment were found to be the strongest motivators for participants to keep up with clinic visits (Madiba *et al.,* 2019). The study demonstrated that the felt stigma affects the client's behavior in determining when to attend the clinic, choosing the location of the health facility to attend, and when to take medication.

Interestingly, in this study almost half of the clients (41.2%) felt that people think having HIV is shameful and should not be associated with it. Moreover, in this study, most of the adults infected with HIV/AIDS (59.5%) felt ashamed of themselves for attending an HIV care clinic and felt self-blame for contracting the infection. The findings concur with a study done in UK among Black African and Caribbean communities, which found that the sense of shame about being HIV-Positive was so great that they did not want to take treatment to live (Glendinning *et al.,* 2019). This suggests the need to integrate HIV care into all healthcare facilities to reduce the stigma of being seen going to the clinic to improve self-esteem and confidence.

In this study, adults living with HIV/AIDS highlighted their fears about how other people would respond if they saw one attending the HIV clinic, making them hesitate to get HIV care services. This finding is in agreement with the results of a previous study, which shows that the participants indicated that at times they are faced with discriminatory practices, stigma, and low acceptance by their respective communities", families, and peers as a result of this illness (Dahlui *et al.,* 2015; Katz *et al.,* 2013). This suggests that as a result of stigma and discrimination, the clients develop internalized stigma, low self-

esteem, and lack of confidence in who they are. As a result, they socially isolate themselves from being seen attending HIV care programs.

Besides, to a lesser extent, some clients reported having experienced health workers talking badly to them because they are HIV positive. Comparable with this finding Katz et al. (2013) found that stigma and discrimination erode the foundation for HIV treatment, care, and support efforts when the PLWHA feel fearful of the health workers. Whereas, Stigma caused by health workers mistreating HIV clients has a negative impact on patient quality of life (Ishimaru *et al.*, 2017), a study in Mbeya, Tanzania, found that support and good patient relationships facilitated linkage to treatment and overcoming associated stigma (Sanga *et al.*, 2019). This study recommended thorough and regular sensitization training and participatory dialogue for health workers regarding overcoming stigma and discrimination.

5.5 Attitudes towards utilization of HIV/AIDS Care and support services

Attitudes can influence a person's health behavior, with those who believe HIV treatment promotes wellbeing more likely to use it, compared to those who doubt its effectiveness (Pettit et al., 2022). The findings of this study show the existence of an association between those who agreed that they do not know what HIV/AIDS services or treatment are available to them and the use of the services (OR: 0.5; 95% CI: 0.3 – 0.8; p = 0.001) where 50% were unlikely to have utilized them. On the contrary, over 90% of participants had a positive attitude towards taking HIV Medication and other treatments as prescribed, which can prolong their lives. This result is comparable with a study done in south Africa on usage of pre-exposure prophylaxis among adolescents which indicated that it’s use was hindered by low awareness of the services (Ajayi *et al.*, 2019). They found that Low usage

of HIV care and support services can be attributed to unawareness and poor attitudes. Nonetheless, sensitization of clients to available services and a positive change in attitudes towards health could benefit timely utilization of HIV care.

Further, the findings from this study indicate that most of the participants (77.1%) who agreed that they were afraid to take ARVs because their spouse or partner would be angry were 60% less likely to have utilized the services (OR: 0.4; 95% CI: 0.3 – 0.6; $p < 0.0001$). In the same way some participants said they fear utilization of HIV treatments because their partners will know that they are HIV-positive which can spoil their relationship. This agrees with a study done in South Africa and Uganda that found that women who did not get the support of their partners were susceptible to poor ART adherence due to a poor attitude towards being abandoned by their partners if they knew they were on ARV treatment (Alhassan *et al.,* 2022). The finding suggests partners with poor attitudes towards HIV are the reason most married clients do not utilize HIV care and support services.

Nonetheless, the long-distance to the clinics made the HIV care unpleasant (OR: 0.4; 95% CI: 0.3 – 0.6; $p < 0.0001$) for the majority of the participants. Related to this finding, a study in Mbeya, Tanzania, on factors influencing linkage to care found that distance and transport costs to HIV care centers where important contextual factors influencing the attitudes of the client to use of the HIV care service (Sanga *et al.*, 2019). Specifically, for those people living with HIV/AIDS who were not sick, the majority of care could take place in the home and in the community through establishing support programs. Similarly, other prior studies found that the long commuting distances to clinics without reliable transport means often discourage HIV clients from seeking consistent care and contribute

to a Loss of follow up (Mpinganjira *et al.*, 2020). Subsequently, a well-trained, equipped, and supported workforce is required for person centered HIV services and support.

To improve the health outcomes of adults living with HIV/AIDS, support services are a crucial inclusion in the care and treatment of HIV adult clients to who have positive attitudes. However, forty-four percent of the participants in this study acknowledged that it is a hassle to use HIV/AIDS support services, whereas the majority (80.0%) of participants did not know what HIV/AIDS support services are available to them. Besides, resources like financial support, Social and medical insurance to pay for non ARVS treatments form a key support system that was raised my many participants in this study. The findings is in agreement with previous study which demonstrate that individual attitudes and what he beliefs are reasons behind which PLWHA utilize HIV treatment and care (Muslimin et al., 2022; Pettit et al., 2022). This could be interpreted to mean, the inclusion of peer-to-peer support, social and emotional support, informational support, outreach services, and nutritional support, among other measures, contributes to the acquisition of positive attitudes for optimum utilization of HIV care and support services.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.0 Overview

This chapter gives the conclusion, recommendations, and suggested areas for further research.

6.2 Conclusion

This study examined factors influencing the utilization of HIV/AIDS care and support services by HIV-infected adults in Baringo County. Survey results showed that the uptake of HIV care and support services was at 50.7%, with knowledge of available HIV care services, community health services, counseling, and family support being key enablers. However, unfavorable factors such as low socioeconomic status, long distances from treatment facilities, difficult accessing HIV treatment centers, and a negative perception of HIV care services have hampered the uptake of HIV care and support services.

With regard to the attitude of HIV Clients towards HIV/AIDS care and Support services and their utilization, the study found two levels of attitudes that influence the utilization of HIV care and support services: societal and individual. At the societal level Policy, social and cultural beliefs influence adult clients' use of HIV care and support services. At the individual level, Attitudes like anxiety, worry, unsupportive partner, delay seeking care, and treatment adherence decrease utilization.

In reference to the influence of accessibility of HIV/AIDS care and support services on utilization, the availability of well-developed comprehensive care centers at designated points in the county did not automatically translate into adequate and accessible care and

support services for all adult clients living with HIV/AIDS in the county. Besides, accessibility factors influencing utilization include location optimization, economic conditions, community participation, social networks, distance, and clinic opening hours.

Nonetheless, this study found significant associations between HIV-related stigma and utilization of HIV care and support services. Specifically, PLHIV were found to internalize the stigma and bigotry they face, contributing to a negative self-image and lower levels of utilization. Stigma resulted in feelings of shame in attending clinics, delayed disclosure, and fear of violence. Weaker relationships were observed between HIV-related stigma with, fear of suffering and death, quality of life, and physical health.

6.3 Recommendations

Based on the study findings, the following are the recommendations made to help increase utilization of HIV care and support services.

Considering the uptake of HIV/AIDS care and support services, the Ministry of Health should consider decentralizing HIV care to lower-tier facilities and communities. Which entails HIV care services that can be offered within the client's locality and their nearest health facilities. In addition, legislation on gender-based violence against HIV-Positive clients should be developed, and interventions should be taken when such cases are reported in the society.

Secondly, regarding attitudes towards HIV/AIDS care and support services HIV/AIDS healthcare providers should engage the Community through peer educators, which could be a powerful motivator for many adult clients infected with HIV/AIDS to utilize HIV care and support services. Doing so, clients will be able to accept their HIV status once they tested positive and minimize their fear of being HIV positive.

Thirdly, regarding accessibility and utilization of HIV care and support services policy makers and health care providers should intensify delivery of care through community-based approaches or through outreaches and home-based care as a cost-effective strategy to enhance utilization. Likewise, HIV care providers should consider scaling up services in under-resourced areas, open clinics on holidays and weekends to enhance HIV care accessibility and utilization.

Finally, when it comes to stigma and utilization of HIV/AIDS care and support services, reducing HIV stigma requires integrating HIV care and treatment with other services, peer support and continued sensitization and training of health care providers

6.4 Suggestions for further Research

This research study findings raises many questions and opens door for research in a variety of areas. Some of the suggestions for further study include:

1. Look at the utilization of care and support services at specific age groups, with a focus on the children, youth, and elderly populations to determine if there are differences in the utilization of HIV care and support services.
2. Contact health care providers and determine their knowledge about the HIV care and support services available in the hospital and community.
3. Research to explore HIV care and support services that are available in the community for adults infected with HIV/AIDS
4. Design a longitudinal study investigating adult populations utilization of HIV care and support services at various stages of life.

LIST OF REFERENCES

Abera, A., Fenti, B., Tesfaye, T., & Balcha, F. (2015). Factors influencing adherence to antiretroviral therapy among people living with HIV/AIDS at ART Clinic in Jimma University teaching hospital, Southwest Ethiopia. *J Pharma Reports, 1*(101), 2.

Ahmed, A., Dujaili, J. A., Jabeen, M., Umair, M. M., Chuah, L.-H., Hashmi, F. K., . . . Chaiyakunapruk, N. (2022). Barriers and enablers for adherence to antiretroviral therapy among people living with HIV/AIDS in the era of COVID-19: a qualitative study from Pakistan. *Frontiers in Pharmacology, 12*, 807446. doi:10.3389/fphar.2021.807446

Ahonkhai, A. A., Rebeiro, P. F., Jenkins, C. A., Rickles, M., Cook, M., Conserve, D. F., . . . Wester, C. (2022). Individual, community, and structural factors associated with linkage to HIV care among people diagnosed with HIV in Tennessee. *PloS One, 17*(3), e0264508.

Aidsconsortium. (2008). What do we really mean by HIV care and Support. Retrieved from https://stopaids.org.uk/wp-content/uploads/2017/06/HIV-care.pdf.

Ajayi, A. I., Mudefi, E., Yusuf, M. S., Adeniyi, O. V., Rala, N., & Ter Goon, D. (2019). Low awareness and use of pre-exposure prophylaxis among adolescents and young adults in high HIV and sexual violence prevalence settings. *Medicine, 98*(43).

Alhassan, Y., Twimukye, A., Malaba, T., Myer, L., Waitt, C., Lamorde, M., . . . Taegtmeyer, M. (2022). 'I fear my partner will abandon me': the intersection of late initiation of antenatal care in pregnancy and poor ART adherence among women living with HIV in South Africa and Uganda. *BMC pregnancy and childbirth, 22*(1), 1-14.

Altice, F., Evuarherhe, O., Shina, S., Carter, G., & Beaubrun, A. C. (2019). Adherence to HIV treatment regimens: systematic literature review and meta-analysis. *Patient preference and adherence, 13*, 475.

Andersen, R. (1968). A behavioral model of families' use of health services. *A behavioral model of families' use of health services.*(25).

Andersen, R., Bozzette, S., Shapiro, M., St Clair, P., Morton, S., Crystal, S., . . . Leibowitz, A. (2000). Access of vulnerable groups to antiretroviral therapy among persons in care for HIV disease in the United States. HCSUS Consortium. HIV Cost and Services Utilization Study. *Health services research, 35*(2), 389.

Andersen, R., & Newman, J. F. (2005). Societal and individual determinants of medical care utilization in the United States. *The Milbank Quarterly, 83*(4), Online-only-Online-only.

Andersen, R. M. (1986). *The Municipal Health Services Program: Can Access be Improved While Controlling Costs?* : University of Chicago, Center for Health Administration Studies.

Andersen, R. M. (1995). Revisiting the behavioral model and access to medical care: does it matter? *Journal of health and social behavior*, 1-10.

Andersen, R. M., Davidson, P., & Ganz, P. (1994). Symbiotic relationships of quality of life, health services research and other health research. *Quality of life Research, 3*(5), 365-371.

Anywar, G., Kakudidi, E., Byamukama, R., Mukonzo, J., Schubert, A., & Oryem-Origa, H. (2020). Indigenous traditional knowledge of medicinal plants used by herbalists in treating opportunistic infections among people living with HIV/AIDS in Uganda. *Journal of ethnopharmacology, 246*, 112205.

Arnold, E. A., Weeks, J., Benjamin, M., Stewart, W. R., Pollack, L. M., Kegeles, S. M., & Operario, D. (2017). Identifying social and economic barriers to regular care and treatment for Black men who have sex with men and women (BMSMW) and who are living with HIV: a qualitative study from the Bruthas cohort. *BMC health services research, 17*(1), 1-11.

Audet, C. M., McGowan, C. C., Wallston, K. A., & Kipp, A. M. (2013). Relationship between HIV stigma and self-isolation among people living with HIV in Tennessee. *PloS one, 8*(8), e69564.

Ayon, S., Ndimbii, J., Jeneby, F., Abdulrahman, T., Mlewa, O., Wang, B., . . . Mburu, G. (2018). Barriers and facilitators of access to HIV, harm reduction and sexual and reproductive health services by women who inject drugs: role of community-based outreach and drop-in centers. *AIDS care, 30*(4), 480-487.

Azia, I. N., Mukumbang, F. C., & Van Wyk, B. (2016). Barriers to adherence to antiretroviral treatment in a regional hospital in Vredenburg, Western Cape, South Africa. *Southern African journal of HIV medicine, 17*(1), 1-8.

Baleeta, K., Muhwezi, A., Tumwesigye, N., Kintu, B. N., Riese, S., Byonanebye, D., . . . Ayebazibwe, B. (2023). Factors that influence the satisfaction of people living with HIV with differentiated antiretroviral therapy delivery models in east Central Uganda: a cross-sectional study. *BMC Health Services Research, 23*(1), 127.

Baringo, C. G. o. (2023). BARINGO COUNTY INTEGRATED DEVELOPMENT PLAN
(2023 – 2027) Retrieved from https://www.baringo.go.ke/images/downloads/Budget_Documents/CIDP/DRAFT-CIDP-2023-2027.pdf.

BaringoGovernment, C. (2018). COUNTY INTEGRATED DEVELOPMENT PLAN
2018 – 2022. Retrieved from https://www.devolution.go.ke/wp-content/uploads/2020/02/Baringo-CIDP-2018-2022.pdf.

Bassett, I. V., Yan, J., Govere, S., Khumalo, A., Ngobese, N., Shazi, Z., . . . Stuckwisch, A. (2022). Uptake of community-versus clinic-based antiretroviral therapy dispensing in the Central Chronic Medication Dispensing and Distribution program in South Africa. *Journal of the International AIDS Society, 25*(1), e25877.

BCASP. (2015 – 2019a). BARINGO COUNTY HIV AND AIDS STRATEGIC PLAN: . Retrieved from https://nacc.or.ke/county-aids-strategic-plans-casps/. .

BCASP. (2015 – 2019b). BARINGO COUNTY

HIV AND AIDS
STRATEGIC PLAN. Retrieved from https://nacc.or.ke/county-aids-strategic-plans-casps/.
Berg, R. C., Page, S., & Øgård-Repål, A. (2021). The effectiveness of peer-support for people living with HIV: A systematic review and meta-analysis. *PloS One, 16*(6), e0252623.
Bisenius, S., Treml, J., Hanschmidt, F., & Kersting, A. (2023). Stigmatization profiles and psychological distress in people at high risk of infection with COVID-19–A study conducted in Germany from March to August 2021. *PloS One, 18*(5), e0285788.
Boakye, D. S., Konadu, E., & Mavhandu-Mudzusi, A. H. (2023). Sociodemographic determinants of knowledge, attitude and practices of Ghanaian nurses towards persons living with HIV and AIDS in Kumasi. *International Journal of Africa Nursing Sciences, 18*, 100519.
Boateng, D., Kwapong, G. D., & 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 women's health, 13*(1), 1-8.
Bockting, W., MacCrate, C., Israel, H., Mantell, J. E., & Remien, R. H. (2020). Engagement and retention in HIV care for transgender women: perspectives of medical and social service providers in New York City. *AIDS patient care and STDs, 34*(1), 16-26.
Bono, R. S., Pan, Z., Dahman, B., Deng, Y., & Kimmel, A. D. (2023). Urban-rural disparities in geographic accessibility to care for people living with HIV. *AIDS care, 35*(12), 1844-1851.
Bor, J., Gage, A., Onoya, D., Maskew, M., Tripodis, Y., Fox, M. P., . . . MacLeod, W. (2021). Variation in HIV care and treatment outcomes by facility in South Africa, 2011–2015: a cohort study. *PLoS Medicine, 18*(3), e1003479. doi:10.1371/journal.pmed.1003479
Bulsara, S. M., Wainberg, M. L., & Newton-John, T. R. (2018). Predictors of adult retention in HIV care: a systematic review. *AIDS and Behavior, 22*, 752-764.
Burgui, C., Guy, D., Fresán, U., Kall, M., Castilla, J., & Lazarus, J. V. (2023). Patient satisfaction with HIV care service in Spain: results from a cross-sectional patient survey. *AIDS care, 35*(6), 892-898.
Chautrakarn, S., Ong-Artborirak, P., Naksen, W., Thongprachum, A., Wungrath, J., Chariyalertsak, S., . . . Kessomboon, P. (2023). Stigmatizing and discriminatory attitudes toward people living with HIV/AIDS (PLWHA) among general adult population: the results from the 6th Thai National Health Examination Survey (NHES VI). *Journal of global health, 13*.
Chimoyi, L., Chikovore, J., Musenge, E., Mabuto, T., Chetty-Makkan, C. M., Munyai, R., . . . Setswe, G. (2022). Understanding factors influencing utilization of HIV prevention and treatment services among patients and providers in a heterogeneous setting: a qualitative study from South Africa. *PLOS Global Public Health, 2*(2), e0000132.

Chirambo, L., Valeta, M., Banda Kamanga, T. M., & Nyondo-Mipando, A. L. (2019). Factors influencing adherence to antiretroviral treatment among adults accessing care from private health facilities in Malawi. *BMC Public Health, 19*(1), 1-11.

Cho, H., Porras, T., Baik, D., Beauchemin, M., & Schnall, R. (2018). Understanding the predisposing, enabling, and reinforcing factors influencing the use of a mobile-based HIV management app: A real-world usability evaluation. *International journal of medical informatics, 117*, 88-95.

Dahlui, M., Azahar, N., Bulgiba, A., Zaki, R., Oche, O. M., Adekunjo, F. O., & Chinna, K. (2015). HIV/AIDS related stigma and discrimination against PLWHA in Nigerian population. *PloS one, 10*(12), e0143749.

Dapaah, J. M. (2016). Attitudes and behaviours of health workers and the use of HIV/AIDS health care services. *Nursing research and practice, 2016*.

Dave, S., Peter, T., Fogarty, C., Karatzas, N., Belinsky, N., & Pant Pai, N. (2019). Which community-based HIV initiatives are effective in achieving UNAIDS 90-90-90 targets? A systematic review and meta-analysis of evidence (2007-2018). *PloS one, 14*(7), e0219826.

Doull, M., O'Connor, A. M., Welch, V., Tugwell, P., & Wells, G. A. (2017). Peer support strategies for improving the health and well-being of individuals with chronic diseases. *The Cochrane database of systematic reviews, 2017*(6).

Evans, R. G., & Stoddart, G. L. (2017). *Producing health, consuming health care*: Routledge.

Fauk, N. K., Mwanri, L., Hawke, K., Mohammadi, L., & Ward, P. R. (2022). Psychological and social impact of HIV on women living with HIV and their families in low-and middle-income Asian countries: A systematic search and critical review. *International journal of environmental research and public health, 19*(11), 6668.

Finkelstein, R. K., Gonsalves, G. S., & Brennan-Ing, M. (2022). Beyond policy fixes to a new Politics of care: the case of older people living with HIV in sub-saharan Africa. In *Aging with HIV in Sub-Saharan Africa: Health and Psychosocial Perspectives* (pp. 195-210): Springer.

Foley, B., Nugent, E., Donnellan, N., Strong, T., O'Brien, C., & Price, G. (2023). How to Be Irish in an Epidemic: A Dossier Article on HIV and AIDS in Ireland, Then and Now. *Journal of Medical Humanities, 44*(1), 7-26.

Fox, M. P. (2015). Retention of adult patients on antiretroviral therapy in low-and middle-income countries: systematic review and meta-analysis 2008–2013. *Journal of acquired immune deficiency syndromes (1999), 69*(1), 98.

Fuge, T. G., Tsourtos, G., & Miller, E. R. (2022). Risk factors for late linkage to care and delayed antiretroviral therapy initiation among adults with HIV in sub-Saharan Africa: a systematic review and meta-analyses. *International Journal of Infectious Diseases, 122*, 885-904.

Gabster, A., Socha, E., Pascale, J. M., Cabezas Talavero, G., Castrellón, A., Quiel, Y., . . . Mayaud, P. (2022). Barriers and facilitators to antiretroviral

adherence and retention in HIV care among people living with HIV in the Comarca Ngäbe-Buglé, Panama. *PloS One, 17*(6), e0270044.
Gandhi, R. T., Bedimo, R., Hoy, J. F., Landovitz, R. J., Smith, D. M., Eaton, E. F., . . . Thompson, M. A. (2023). Antiretroviral drugs for treatment and prevention of HIV infection in adults: 2022 Recommendations of the International Antiviral Society–USA Panel. *JAMA, 329*(1), 63-84.
Gardner, E. M., McLees, M. P., Steiner, J. F., Del Rio, C., & Burman, W. J. (2011). The spectrum of engagement in HIV care and its relevance to test-and-treat strategies for prevention of HIV infection. *Clinical infectious diseases, 52*(6), 793-800.
Gazimbi, M. M., & Magadi, M. A. (2019). Individual-and community-level determinants of antenatal HIV testing in Zimbabwe. *Journal of biosocial science, 51*(2), 203-224.
Glendinning, E., Spiers, J., Smith, J. A., Anderson, J., Campbell, L. J., Cooper, V., & Horne, R. (2019). A qualitative study to identify perceptual barriers to antiretroviral therapy (ART) uptake and adherence in HIV positive people from UK black African and Caribbean communities. *AIDS and Behavior, 23*, 2514-2521.
Gumede, S. B., Wensing, A. M., Lalla-Edward, S. T., de Wit, J. B., Francois Venter, W., Tempelman, H. A., & Hermans, L. E. (2023). Predictors of Treatment Adherence and Virological Failure Among People Living with HIV Receiving Antiretroviral Therapy in a South African Rural Community: A Sub-study of the ITREMA Randomised Clinical Trial. *AIDS and Behavior*, 1-23.
Hadaye, R. S., Jambhale, V. B., & Shastri, S. (2020). Assessment of adherence and factors contributing to non-adherence among patients on anti-retroviral therapy in a tertiary care hospital: A cross sectional study. *Journal of Family Medicine and Primary Care, 9*(4), 1921.
Health, N. I. o. (2021). HIV Treatment Adherence. Retrieved from https://hivinfo.nih.gov/understanding-hiv/fact-sheets/hiv-treatment-adherence.
Ishimaru, T., Wada, K., Hoang, H. T. X., Bui, A. T. M., Nguyen, H. D., Le, H., & Smith, D. R. (2017). Nurses' willingness to care for patients infected with HIV or Hepatitis B/C in Vietnam. *Environmental health and preventive medicine, 22*(1), 1-7.
Isika, A. I., Shehu, A., Dahiru, T., Obi, I. F., Oku, A. O., Balogun, M. S., & Etokidem, A. (2022). Factors influencing adherence to antiretroviral therapy among HIV-infected adults in Cross River State, Nigeria: a cross-sectional study. *The Pan African Medical Journal, 43*.
Ivo, N., Ferdinand, C., Brian V W., . (2020). Barriers to adherence to antiretroviral treatment in a regional hospital in Vredenburg, Western Cape, South Africa. *Southern African Journal of HIV Medicine*. Retrieved from https://sajhivmed.org.za/index.php/hivmed/article/view/476/874.
Januraga, P. P., Reekie, J., Mulyani, T., Lestari, B. W., Iskandar, S., Wisaksana, R., . . . Wirawan, D. N. (2018). The cascade of HIV care among key populations in Indonesia: a prospective cohort study. *The Lancet HIV, 5*(10), e560-e568.

Kadushin, G. (2004). Home health care utilization: a review of the research for social work. *Health & social work, 29*(3), 219-244.
Kang, J.-Y., Farkhad, B. F., Chan, M.-p. S., Michels, A., Albarracin, D., & Wang, S. (2022). Spatial accessibility to HIV testing, treatment, and prevention services in Illinois and Chicago, USA. *PloS One, 17*(7), e0270404.
Kariwala, P., Kandpal, S. D., Singh, A. K., Pathak, A., & Dixit, S. (2022). Quality of life of people living with HIV/AIDS before and after receiving antiretroviral therapy. *Indian Journal of Community Health, 34*(1), 94-100.
Kasahun, A. E., Sendekie, A. K., Mekonnen, G. A., Sema, F. D., Kemal, L. K., & Abebe, R. B. (2022). Impact of Personal, Cultural and Religious Beliefs on Medication Adherence among Patients with Chronic Diseases at University Hospital in Northwest Ethiopia. *Patient preference and adherence*, 1787-1803. doi:10.2147/ppa.s370178
KASFII. (2020/2021 – 2024/25). Sustain Gains, Bridge Gaps and Accelerate Progress. Retrieved from https://nacc.or.ke/wp-content/uploads/2021/01/KASFII_Web22.pdf. .
Katz, I. T., Ryu, A. E., Onuegbu, A. G., Psaros, C., Weiser, S. D., Bangsberg, D. R., & Tsai, A. C. (2013). Impact of HIV-related stigma on treatment adherence: systematic review and meta-synthesis. *Journal of the International AIDS Society, 16*, 18640.
KENPHIA. (2018). Kenya Population Based HIV Impact Assessment. Retrieved from at https://www.health.go.ke/wp-content/uploads/2020/02/KENPHIA-2018-PREL-REP-2020-HR3-final.pdf.
Kharsany, A. B., & Karim, Q. A. (2016). HIV infection and AIDS in sub-Saharan Africa: current status, challenges and opportunities. *The open AIDS journal, 10*, 34.
Kim, H.-J., Fredriksen-Goldsen, K. I., Bryan, A. E., & Muraco, A. (2017). Social network types and mental health among LGBT older adults. *The Gerontologist, 57*(suppl_1), S84-S94.
KNBS. (2019a). 2019 Kenya Population and Houssing Census Volume 1: Population by County and Subcounty Retrieved from https://www.knbs.or.ke/download/2019-kenya-population-and-housing-census-volume-i-population-by-county-and-sub-county/.
KNBS. (2019b). COUNTY GOVERNMENT OF BARINGO
COUNTY GENDER DATA SHEET. Retrieved from https://data.unwomen.org/sites/default/files/inline-files/BARINGO%20WEB_0.pdf.
KNBS. (2023). Economic Survey 2023: PROVIDING, MANAGING AND PROMOTING QUALITY STATISTICS. Retrieved from https://www.knbs.or.ke/download/economic-survey-2023/.
Koga, I., Wakatabe, R., Okamoto, N., Sasai, A., Kambara, K., Maldonado, A., . . . Okoli, C. (2022). Factors Associated with treatment satisfaction among people living with HIV in Japan and other selected countries: Examination of the intertwined roles of medication, patient, and provider characteristics. *AIDS and Behavior*, 1-19.
Kruk, M. E., Gage, A. D., Arsenault, C., Jordan, K., Leslie, H. H., Roder-DeWan, S., . . . Doubova, S. V. (2018). High-quality health systems in the

Sustainable Development Goals era: time for a revolution. *The Lancet global health, 6*(11), e1196-e1252.
Kumar, V. (2023). Stigma and Discrimination Related HIV-AIDS. *Journal of Research in Social Science and Humanities, 2*(9), 20-28.
Lai, H., Li, R., Li, Z., Zhang, B., Li, C., Song, C., . . . Liang, S. (2023). Modelling the impact of treatment adherence on the transmission of HIV drug resistance. *Journal of Antimicrobial Chemotherapy*, dkad186.
Larki, M., & Roudsari, R. L. (2020). Home-Based Care, the Missing Link in Caring of Patients Living with HIV/AIDS and Their Family Members: A Narrative Review. *International Journal of Community Based Nursing and Midwifery, 8*(3), 190.
Leddy, A. M., Weiss, E., Yam, E., & Pulerwitz, J. (2019). Gender-based violence and engagement in biomedical HIV prevention, care and treatment: a scoping review. *BMC Public Health, 19*, 1-14. doi:10.1186/s12889-019-7192-4
Lederle, M., Tempes, J., & Bitzer, E. M. (2021). Application of Andersen's behavioural model of health services use: a scoping review with a focus on qualitative health services research. *BMJ open, 11*(5), e045018.
Li, Y., Zhang, X.-W., Liao, B., Liang, J., He, W.-J., Liu, J., . . . Wang, J.-Y. (2021). Social support status and associated factors among people living with HIV/AIDS in Kunming city, China. *BMC Public Health, 21*(1), 1-6.
Lin, B., Zhong, X., Ma, Y., Pan, H., Dai, J., Liang, H., & Huang, A. (2020). Study on Influencing Factors to HIV Health Services Among MSM: Based on Andersen Behavioral Model.
Madiba, S., & Josiah, U. (2019). Perceived stigma and fear of unintended disclosure are barriers in medication adherence in adolescents with perinatal HIV in Botswana: a qualitative study. *BioMed Research International, 2019*.
Malama, K., Logie, C. H., Sokolovic, N., Skeritt, L., O'Brien, N., Cardinal, C., . . . de Pokomandy, A. (2022). Pathways from HIV-related stigma, racial discrimination and gender discrimination to HIV treatment outcomes among women living with HIV in Canada: Longitudinal cohort findings. *JAIDS Journal of Acquired Immune Deficiency Syndromes*, 10.1097.
Mavhu, W., Willis, N., Mufuka, J., Bernays, S., Tshuma, M., Mangenah, C., . . . Araya, R. (2020). Effect of a differentiated service delivery model on virological failure in adolescents with HIV in Zimbabwe (Zvandiri): a cluster-randomised controlled trial. *The Lancet global health, 8*(2), e264-e275.
Mayer, K. H., Agwu, A., & Malebranche, D. (2020). Barriers to the wider use of pre-exposure prophylaxis in the United States: a narrative review. *Advances in Therapy, 37*, 1778-1811.
McCarthy, M., Tao, J., Lerebours, A., Rodriguez, C., Flanigan, T. P., & Sanchez, M. C. (2022). Evaluating barriers to viral suppression among people with HIV in Santiago, Dominican Republic. *Journal of the International Association of Providers of AIDS Care (JIAPAC), 21*, 23259582221096522.

Mgbako, O., Conard, R., Mellins, C. A., Dacus, J.-d., & Remien, R. H. (2022). A systematic review of factors critical for hiv health literacy, ART adherence and retention in care in the US for racial and ethnic minorities. *AIDS and Behavior, 26*(11), 3480-3493.

Minja, L., Cichowitz, C., Knettel, B. A., Mahande, M. J., Kisigo, G., Knippler, E. T., . . . Watt, M. H. (2019). Attitudes toward long-term use of antiretroviral therapy among HIV-infected pregnant women in Moshi, Tanzania: A longitudinal study. *AIDS and Behavior, 23*, 2610-2617.

Mitchell, M. M., Nguyen, T. Q., Maragh-Bass, A. C., Isenberg, S. R., Beach, M. C., & Knowlton, A. R. (2017). Patient-provider engagement and chronic pain in drug-using, primarily African American persons living with HIV/AIDS. *AIDS and Behavior, 21*(6), 1768-1774.

MOH, K. M. o. H. (2016). Kenya AIDS Response

Progress Report 2016. Retrieved from https://nacc.or.ke/wp-content/uploads/2016/11/Kenya-AIDS-Progress-Report_web.pdf.

Mpinganjira, S., Tchereni, T., Gunda, A., & Mwapasa, V. (2020). Factors associated with loss-to-follow-up of HIV-positive mothers and their infants enrolled in HIV care clinic: a qualitative study. *BMC Public Health, 20*, 1-10.

Muslimin, K. D., Baso, Y. S., Hidayanty, H., Syarif, S., Aminuddin, A., & Bahar, B. (2022). The Effect of HIV/AIDS Education Prevention Using Web-Based She Smart on Knowledge, Attitudes, and Practice in Adolescent Girls. *International Journal of Health and Medical Sciences, 5*(1), 31-36.

Mutsotso, B. M. (2013). The East Pokot Pastoralists in conflict siege: Reflections on cultural interpretations of persistent conflict. *International Journal of Education and Research, 1*.

Nakate, M. G., Omech, B., Kwagala, C., Gimbo, I., Bulitya, A., Kyeswa, J., . . . Udho, S. (2023). Factors Influencing the Status of Adherence to Second Clinic Visit Among Clients Newly Diagnosed with HIV in Northern Uganda: A Mixed-Methods Study. *HIV/AIDS-Research and Palliative Care*, 135-143.

National AIDS and STI Control Programme, N. (2016). Kenya HIV County Profiles 2016. Retrieved from https://nacc.or.ke/wp-content/uploads/2016/12/Kenya-HIV-County-Profiles-2016.pdf.

Nimwesiga, C., Taremwa, I. M., Nakanjako, D., & Nasuuna, E. (2023). Factors Associated with Retention in HIV Care Among HIV-Positive Adolescents in Public Antiretroviral Therapy Clinics in Ibanda District, Rural South Western Uganda. *HIV/AIDS-Research and Palliative Care*, 71-81.

Nutor, J. J., Duah, H. O., Agbadi, P., Duodu, P. A., & Gondwe, K. W. (2020). Spatial analysis of factors associated with HIV infection in Malawi: indicators for effective prevention. *BMC public health, 20*(1), 1-14.

Nyato, D., Nnko, S., Komba, A., Kuringe, E., Plotkin, M., Mbita, G., . . . Wambura, M. (2019). Facilitators and barriers to linkage to HIV care and treatment among female sex workers in a community-based HIV

prevention intervention in Tanzania: A qualitative study. *PloS One, 14*(11), e0219032. doi:10.1371/journal.pone.0219032

Ogunbajo, A. (2016). Barriers, Motivators, Facilitators related to Engagement in HIV care among Ghanaian men who have sex with men (MSM) living with HIV: A Qualitative Study.

Organization, W. H. (2008). Operations manual for delivery of HIV prevention, care and treatment at primary health centres in high-prevalence, resource-constrained settings: Edition 1 for fieldtesting and country adaptation.

Pambou, H. O. T., Fossi, B. T., Gagneux-Brunon, A., Roche, F., Guyot, J., Botelho-Nevers, E., . . . Nkenfou, C. N. (2023). Physical activity and quality of life of people aged 50 and over living with HIV/AIDS: A cross-sectional study in a cohort in Yaounde, Cameroon. *Clinical Epidemiology and Global Health, 22*, 101303.

Parsons, S. (2022). Fear of punishment in another world: A follow-up examination of the religious beliefs about HIV/AIDS—a decade of progress? *Journal of religion and health, 61*(4), 3350-3362.

Pashaeypoor, S., Sarkhani, N., Salmani, S., Jamshidi, E., & Maasoumi, R. (2023). Explaining the perspective of people living with HIV on health-promoting behaviours based on Pender's model: A directed content analysis. *Nursing Open*.

Pengid, S., Peltzer, K., de Moura Villela, E. F., Fodjo, J. N. S., Siau, C. S., Chen, W. S., . . . Wanyenze, R. K. (2022). Using Andersen's model of health care utilization to assess factors associated with COVID-19 testing among adults in nine low-and middle-income countries: an online survey. *BMC Health Services Research, 22*(1), 1-11.

Pettit, A. C., Pichon, L. C., Ahonkhai, A. A., Robinson, C., Randolph, B., Gaur, A., . . . Brantley, M. (2022). Comprehensive Process Mapping and Qualitative Interviews to Inform Implementation of Rapid Linkage to HIV Care Programs in a Mid-Sized Urban Setting in the Southern United States. *JAIDS Journal of Acquired Immune Deficiency Syndromes, 90*(1), S56-S64.

Pope, C. N., Stavrinos, D., Fazeli, P. L., & Vance, D. E. (2022). Transportation barriers and health-related quality of life in a sample of middle-aged and older adults living with HIV in the deep south. *AIDS and Behavior, 26*(7), 2148-2158.

Positively, U. (2017). National Standards of Peer Support in HIV. In.

Project, T. W. (2020). Understanding CD4 Cells and CD4 Cell Tests. Retrieved from https://www.thewellproject.org/hiv-information/understanding-cd4-cells-and-cd4-cell-tests.

Roscoe, C., Namibia, C., Kalapila, A. G., Spach, D. H., & AETC, M. W. (2019). Retention in HIV Care. Retrieved from https://www.hiv.uw.edu/go/basic-primary-care/retention-care/core-concept/all.

Saint-Jean, G., Metsch, L., Gomez-Marin, O., Pierre, C., Jeanty, Y., Rodriguez, A., & Malow, R. (2011). Use of HIV primary care by HIV-positive Haitian immigrants in Miami, Florida. *AIDS care, 23*(4), 486-493.

Sanga, E. S., Mukumbang, F. C., Mushi, A. K., Lerebo, W., & Zarowsky, C. (2019). Understanding factors influencing linkage to HIV care in a rural setting, Mbeya, Tanzania: qualitative findings of a mixed methods study. *BMC Public Health, 19*(1), 1-15. doi:10.1186/s12889-019-6691-7

Schatz, E., Knight, L., Mukumbang, F. C., Teti, M., & Myroniuk, T. W. (2021). 'You Have to Withstand That Because You Have Come for What You Have Come for': barriers and facilitators to antiretroviral treatment access among older South Africans living with HIV. *Sociology of Health & Illness, 43*(3), 624-641.

Shen, M., Xiao, Y., Rong, L., Zhuang, G., Song, C., Zhao, Q., . . . Chen, H. (2023). The impact of attrition on the transmission of HIV and drug resistance. *Aids, 37*(7), 1137-1145.

Sidibé, M. (2015). The sustainable development agenda and the end of AIDS. *The Lancet, 386*(9989), 108-110. doi:10.1016/s0140-6736(15)61041-8

Sullivan, P. S., Johnson, A. S., Pembleton, E. S., Stephenson, R., Justice, A. C., Althoff, K. N., . . . Rosenberg, E. S. (2021). Epidemiology of HIV in the USA: epidemic burden, inequities, contexts, and responses. *The Lancet, 397*(10279), 1095-1106.

Thompson, D., Fowler, H. W., & Fowler, F. G. (1995). *The concise Oxford dictionary of current English*: Clarendon Press Oxford.

Travers, J. L., Hirschman, K. B., & Naylor, M. D. (2020). Adapting Andersen's expanded behavioral model of health services use to include older adults receiving long-term services and supports. *BMC geriatrics, 20*(1), 1-16.

Tumwine, C., Aggleton, P., & Bell, S. (2019). Accessing HIV treatment and care services in fishing communities around Lake Victoria in Uganda: mobility and transport challenges. *African Journal of AIDS Research, 18*(3), 205-214.

Ugwire. (2020). HIV Prevalence in Kenya 2020 per county. . Retrieved from; https://ugwire.com/hiv-prevalence-kenya-2019-2020/.

UNAIDS. (2016). The Need for Routine Viral Load Testing. Retrieved from https://www.unaids.org/sites/default/files/media_asset/JC2845_en.pdf

UNAIDS. (2017). UNAIDS Data 2017. Retrieved from http://www.unaids.org/sites/default/files/media_asset/20170720_Data_book_2017_en.pdf

UNAIDS. (2019). UNAIDS
DATA
2019. Retrieved from https://www.unaids.org/en/resources/documents/2019/2019-UNAIDS-data.

UNAIDS. (2020). Global AIDS Update Fact Sheet. Retrieved from https://www.unaids.org/en/resources/fact-sheet. .

UNAIDS. (2021a). Global AIDS Update 2021: Confronting Inequalites. . Retrieved from https://www.unaids.org/sites/default/files/media_asset/2021-global-aids-update_en.pdf.

UNAIDS. (2021b). Global HIV & AIDS statistics — Fact sheet. Retrieved from https://www.unaids.org/en/resources/fact-sheet.

UNAIDS. (2019). UNAIDS Data 2019. Retrieved from https://www.unaids.org/sites/default/files/media_asset/2019-UNAIDS-data_en.pdf.

van Wyk, B. E., & Davids, L.-A. C. (2019). Challenges to HIV treatment adherence amongst adolescents in a low socio-economic setting in Cape Town. *Southern African journal of HIV medicine, 20*(1), 1-7.

WHO. (2017). END HIV/AIDS BY 2030: HIV/AIDS FRAMEWORK FOR ACTION IN THE WHO AFRICAN REGION, 2016 - 2020
Retrieved from https://apps.who.int/iris/bitstream/handle/10665/259638/EndAIDS-eng.pdf;sequence=1#:~:text=To%20end%20the%20HIV%2FAIDS,for%20all%20at%20all%20ages.&text=Targets%3A%202016%20%2D%202020-,1.,2.

WHO, W. H. O. (2008a). HIV/AIDS and mental health:
Report by the Secretariat. Retrieved from https://apps.who.int/gb/archive/pdf_files/EB124/B124_6-en.pdf.

WHO, W. H. O. (2008b). The World Health Report 2008: Primary Health Care, Now More Than Ever. Retrieved from https://reliefweb.int/sites/reliefweb.int/files/resources/98C1FCE13A0C5968C12574E1003F944B-who_oct2008.pdf.

Willis, N., Milanzi, A., Mawodzeke, M., Dziwa, C., Armstrong, A., Yekeye, I., . . . James, V. (2019). Effectiveness of community adolescent treatment supporters (CATS) interventions in improving linkage and retention in care, adherence to ART and psychosocial well-being: a randomised trial among adolescents living with HIV in rural Zimbabwe. *BMC Public Health, 19*(1), 1-9.

Xu, J.-F., Wang, P.-C., & Cheng, F. (2020). Health related behaviors among HIV-infected people who are successfully linked to care: an institutional-based cross-sectional study. *Infectious Diseases of Poverty, 9*(1), 1-9.

Yaya, S., Ghose, B., Udenigwe, O., Shah, V., Hudani, A., & Ekholuenetale, M. (2019). Knowledge and attitude of HIV/AIDS among women in Nigeria: a cross-sectional study. *European journal of public health, 29*(1), 111-117.

Yuvaraj, A., Mahendra, V. S., Chakrapani, V., Yunihastuti, E., Santella, A. J., Ranauta, A., & Doughty, J. (2020). HIV and stigma in the healthcare setting. *Oral Diseases, 26*, 103-111.

Zewude, S. B., & Ajebe, T. M. (2022). Magnitude of optimal adherence and predictors for a low level of adherence among HIV/AIDS-infected adults in South Gondar zone, Northwest Ethiopia: a multifacility cross-sectional study. *BMJ open, 12*(1), e056009.

Zinski, A., Westfall, A. O., Gardner, L. I., Giordano, T. P., Wilson, T. E., Drainoni, M.-L., . . . Batey, D. S. (2015). The contribution of missed clinic visits to disparities in HIV viral load outcomes. *American Journal of Public Health, 105*(10), 2068-2075. doi:10.2105/ajph.2015.302695

Zürcher, K., Mooser, A., Anderegg, N., Tymejczyk, O., Couvillon, M. J., Nash, D., . . . consortia, M. (2017). Outcomes of HIV-positive patients lost to follow-up in African treatment programmes. *Tropical Medicine & International Health, 22*(4), 375-387.

APPENDICES

Appendix 1: Participant Informed Consent Form

Title: Utilization of HIV/AIDS care and support services by HIV infected adults in Baringo County

Principal Investigator: Danvas Nyachio Otara (MScN Student MMUST)

Dear Participant

I Danvas N Otara am a Masters student at Masinde Muliro University of science and technology. Today, I am here to carry out a study on Utilization of HIV care and support services by HIV infected adults in Baringo County. This form will give you information you need, so that you can decide on whether to participate or not to in the study. There are no wrong or right answers. I assure you that the information you give will be totally confidential and you will not be required to identify yourself by name.

There may be no direct benefits accruing from participating in the study. However, your participation and/or answers to the questions may provide useful insights into improving HIV/AIDS care and support service delivery for people living with HIV/AIDS.

Purpose

The information obtained from this study will be used to inform policy on utilization of HIV/AIDS care and support services by HIV infected clients.

Procedure:

You will be interviewed using a self-administered questionnaire (You will be assisted in case you are unable to read or write). Filling the questionnaire may take approximately 40 minutes and you participants will be required to give answers to all the questions. There

will be no innovative procedure during this study but information required will involve issues concerning personal experiences with HIV care and supportive services.

Voluntary participation

I wish to let you know your participation in this study is voluntary. You should not feel intimidated or forced to do so if you do not want to be part of the study. Therefore, you may refuse to answer any question or if during the study you feel like leaving your free to opt out. This will not jeopardize your treatment or care at the facility for now or in future.

Should you have any areas that are unclear to you or questions that need to be answered regarding the study, please feel to contact the undersigned whose contacts are given below;

1. Danvas Nyachio Otara, P.o Box 401, Kabarnet. Telephone Number; 0725469316
2. Masinde Muliro University/Ethics and Research committee, P.O Box 190-50100, Kakamega.

CONSENT FORM

When you sign below, it shows that you have agreed to participate in the study. If you do not understand any part of the information that has been read to you/you have read, be sure to ask questions. Do no sign until you have understood all that is expected or required.

I wish to take part in the study entitled: Utilization of HIV Care and support services by HIV infected adults in Baringo County, Kenya. I understand that I may at any time during the study withdraw my consent without any consequences. I have understood the information given in this sheet and I give my consent to be interviewed.

Respondent number ……Signature…….…… Date……..…

Name of the researcher: ……...… Signature……Date……

Appendix 2: Study Questionnaire

Study: Utilization of HIV Care and Support Services Questionnaire

This study seeks to find out how well the HIV positive clients utilize care and support services. You are therefore, invited to answer these questions as honestly as you can to express your own experiences.

You do not have to answer if you do not want to but completing as much of the questionnaire as you can would help us to better manage any problems that you may be facing with the care and support services.

SECTION A: PREDISPOSING FACTORS

i. Socio – Demographic Information of Participant

No.	Question	Response	Coding
1	Gender ***(circle one)***	1 = Male 2 = Female	
2	Residential place ***(circle one)***	1 = Rural 2 = Urban 3 = Semi-Urban	
3	What's your Ethnic Origin ***(Choose one)***	1 = Tugen 2 = Elchamus 3 = Pokot 4 = Endrois 5 = other (specify)…….……	
4	What's your age in Years	Age as at the last birthday_____	
5	What is your Marital Status	1 = Married 3 = Divorced 2 =Never Married 4 = Widowed	
6	What is your religious Affiliation	1 = None 2 = Atheists 3 = Muslim 4 = Catholics 5 = Protestant 6 = Others (specify ….....	
7	What is your highest educational level? ***(Circle one)***	1 = No Formal Education 2 = Primary 3 = Secondary 4 = College	

		5 = University	
8	What do you do for a living? ***(Circle one)***	1 = Employed 2 = Not employed/Looking for work 3 = Business 4 = farming 5 = Student/currently in school 6 = Disabled, Not working 7 = Retired 8 = Other (specify) ….....	
9	What is your average monthly income in Kenya shillings ***(Circle one)***	1 = Less than 3,000 2 = Between 3,001 to 10,000 3 = between 10,001 to 30,000 4 = between 30,001 to 50,000 5 = Above 50,000	
10	How many people are supported by this income including yourself	…..	
11	How long have you been diagnosed with HIV?	In Months ……. …..	
12	What was your last CD4 cell count?	…..	
13	What was your lowest CD4+ County Ever?	1 = 0-99 2 = 100-199 3 = 200-499 4 = Above 500 5 = don't know	

ii. Stigma and Discrimination

In the past 6 months, how often have you observed the following in a health facility you attend for care and treatment?

1 = Never, 2 = Once or Twice, 3 = Several times, 4 = Most of the times

	Question	1	2	3	4	Code
14	Healthcare workers unwilling to care or treat a patient living with or thought to be living with HIV					
15	Healthcare workers providing poorer quality of care to a patient living with or thought to be living with HIV, relative to other patients					
16	Healthcare workers talking badly about people living with or thought to be living with HIV who are seeking care and treatment in the health facility					
17	Health care workers neglecting people living with HIV seeking treatment because of their HIV status					
18	Disclosing the HIV status of a person living with HIV to others without his/her consent?					
19	In the last 6 months, how often have you been denied health services, because of your HIV status?					

Do you strongly agree, agree, disagree, or strongly disagree with the following statements?

1 = strongly agree, 2 = agree, 3 = disagree, 4 = strongly disagree

	Question	1	2	3	4	code
20	I receive adequate HIV care and support from the comprehensive care clinic I'm enrolled.					
21	My health facility has guidelines to protect patients living with HIV from discrimination.					
22	People living with HIV feel ashamed of themselves attending HIV care clinic.					
23	People think that having HIV is shameful and they should not be associated with me					
24	The fears about how other people would respond if they see you attending HIV clinic make you hesitate to getting HIV care services?					
25	People talk badly about you because you are enrolled for HIV care and treatment?					
26	Friends and family avoid you because you are enrolled for HIV care and treatment?					
27	Colleagues avoid you because you attend comprehensive care Center for HIV treatment?					

iii. Attitudes Towards HIV care and Support

Please tick the number that best describes your feelings about each of the following statements

Do you strongly agree, agree, disagree, or strongly disagree with the following statements?

1 = strongly agree, 2 = agree, 3 = disagree, 4 = strongly disagree

No	Question	1	2	3	4	Code
28	Compared to other Illness, HIV/AIDS is Not very serious					
29	I do Not Know what HIV/AIDS services or treatment available to me					
30	Taking HIV Medication and other treatments as prescribed can prolong my life					
31	Taking HIV treatments interferes a great deal with my normal activities					
32	Side effects of medication are unbearable					
33	I'm afraid to take ARVs because my spouse/ partner would be angry?					
34	HIV treatment will work more effectively only when I'm feeling bad					
35	I have a responsibility to adhere to the treatment, care and support schedules.					
36	It is a hassle to use HIV treatment and support services					
37	The long-distance aspects to the clinics make the HIV care unpleasant.					
38	People on consistent uptake of HIV care and supportive services have improved health outcomes allowing them to live long.					
39	Having regular visits to an HIV care provider and consistent uptake of HIV medical and supportive care leads to improved health outcomes					

SECTION B: HEALTH NEEDS

i. Your health and well being

This survey asks for your views about your health. This information will keep track of how you feel and how well you are able to do your usual activities**.**

40	In general, would you say your health is: ***(Circle one)***	1. = Excellent 2. = Very good 3. = Good 4. = Fair 5. = Poor	
41	The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so how much?		
	a) Moderate activities, such as moving a table, house cleaning or regular daily activities?	1. = Yes, limited a lot 2. = Yes, limited a little 3. = No, not limited at all	
	b) Walking to work	1. = Yes, limited a lot 2. = Yes, limited a little 3. = No, not limited at all	

42	During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)? ***(Circle one)***		
	a) Accomplished less than you would like	1. = All of the time 2. = Most of the time 3. = Some of the time 4. = A little of the time 5. = None of the time	
	b) Did work or other activities less carefully than usual	1 = All of the time 2 = Most of the time 3 = Some of the time 4 = A little of the time 5 = None of the time	
43	During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?	1 = Not at all 2 = A little bit 3 = Moderately 4 = Quite a bit 5 = Extremely	
44	These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks? ***(Circle one)***		
	a) Have you felt calm and peaceful?	1 = All of the time 2 = Most of the time 3 = Some of the time 4 = A little of the time 5 = None of the time	
	b) Did you have a lot of energy?	1. = All of the time 2. = Most of the time 3. = Some of the time 4. = A little of the time 5. = None of the time	
	c) Have you felt downhearted and depressed?	1 = All of the time 2 = Most of the time 3 = Some of the time 4 = A little of the time 5 = None of the time	
45	During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, or clinic etc.)	1 = All of the time 2 = Most of the time 3 = Some of the time 4 = A little of the time 5 = None of the time	

	ii. Linkage to Care		
46	How long after learning you were HIV Positive did you first see a doctor, nurse or other health care worker for HIV Medical Care? **Would you say it was?**	1 = less than 3 months 2 = 3 to 6 months 3 = 6 months to 1 year 4 = more than a year	
47	How easy or difficult was it for you to see a doctor, nurse or other health care worker for HIV medical care the first time after you tested positive? **Would you say**	1. = Very difficult 2. = Somewhat difficult	Go to # 48 and continue
		3. = Somewhat easy 4. = Very easy	Go to #50 and continue
48	What made it the most difficult for you to get HIV medical care that first time after you tested positive?	Describe: _____ _____ _____ _____	
49	What are the most important things that should be done to make it easy as possible for people who get HIV Medical care within three months of testing positive?	Describe: _____ _____ _____ _____	
	iii. Retention in Care **Now I want to ask you some questions about HIV Medical care**		
50	How easy or difficult is it for you to see a doctor, nurse, or other health care worker for HIV medical care Now	1 = Very difficult 2 = Somewhat difficult	Go to #51 and continue
		3 = Somewhat easy 4 = Very easy	Go to # 53 and continue
51	What make is difficult for you to get HIV medical care now?	Describe: _____ _____ _____ _____	
52	What helps you get HIV medical care now?	Describe: _____ _____ _____ _____	
53	In the past 2 years, has there been a time you did not see a doctor, a	1 = Yes	If Yes Go to #

	nurse, or other medical care provider for HIV medical care for more than 6 months or longer?	2 = NO	54 if No Go to # 58
54	Please tell me the main reasons you did not see a doctor, nurse, or other health care worker for HIV medical care during that time? **Please select all that apply.**	1. = I didn't want to think about being HIV positive 2. = My doctor told me I only needed to go once a year 3. = My CD4 count and viral load were good 4. = I felt fine and didn't think I needed to go 5. = I didn't know where to go 6. = I was unable to get an appointment 7. = I forgot or missed my appointment 8. = I felt too sick to go 9. = I was unable to get transportation 10. = I had other responsibilities such as child care or work 11. = I didn't have enough money or health insurance 12. = I was homeless or did not have a steady place to live 13. = I was drinking or using drugs 14. = I didn't feel comfortable going there 15. = I didn't like the way I was treated 16. = I was incarcerated 17. = Stigma related to HIV 18. = Other (please specify) _____ _____ _____	
55	Did you start getting HIV medical care again after you stopped during that time?	1 = Yes 2 = NO	
56	What helped you the most get reconnected with HIV Medical care?	Describe:_____ _____ _____ _____	
57	What do you think are the Most important things that should be done to help someone stay in HIV Medical care without stopping or taking a break?	Describe:_____ _____ _____ _____ _____	

iv. Treatment Adherence

58	In the past 30 days, have you skipped or missed a dose of your HIV medication(s), other than being told to do so by a doctor, nurse, or other health care worker??	1 = Yes 2 = NO 3 = Not using Medications	
59	In general, how easy or difficult is it for you to take all of your HIV medications without skipping or missing any doses? Would you say it is?	1. = Very difficult 2. = Somewhat difficult 3. = Somewhat easy 4. = Very easy	
60	What makes it most difficult for you to take all of your HIV medication without skipping or missing any doses?	Describe:_____ _____ _____ _____ _____	
61	What are the most important things that help you take your HIV medications without skipping or Missing any doses?	Describe:_____ _____ _____ _____	
	v. Satisfaction with Care		
62	Which of the following should HIV care providers do to serve you better? **Please select all that apply**	1 = Be more experienced/ knowledgeable about providing HIV care 2 = Know what HIV-related services are available in my area and provide referrals 3 = Have better office hours that are more convenient for me 4 = Reduce the wait time to get an appointment 5 = Make appointments quicker 6 = Provide services in a location that are easier for me to get to 7 = Advocate for my needs within the service system 8 = Know how to work with people from other cultures 9 = Know a language other than English 10 = Other (please specify): _____ _____	

63	What is the single most important change that you would suggest to improve services for individuals or families living with HIV?	Describe:_____ _____ _____ _____ _____ _____	
64	At which health facility do you currently receive treatment services?	1 = _____ (Name of Facility) 2 = I don't go to a health facility	
65	When was the last time you visited that health facility – **would you say** [**read responses, check ONLY one response**]	1 = Within the last week/last 7 days 2 = More than a week ago but in the last month 3 = More than a month ago but in the last 3 months 4 = Others (Specify)	
66	Do you know of any other health facility [besides the facility you go to in Q67] where you could get ARVs and support services?	1 = Yes 2 = No 3 = Don't Know 4 = No Response	
67	Why do you go to your usual facility [mentioned in Q67] instead of one of the other treatment facilities? [**Read responses, check all that apply]**	1 = It is closer 2 = so, no one recognizes me 3 = I prefer the services offered 4 = Transport is easier 5 = Other (Specify) _____ _____ _____	
68	In the last 6 months, have you ever visited this health facility [from Q67] and not received the services you went for?	1 = Yes 2 = No 3 = Don't Know 4 = No Response	
69	What was the reason you could not receive services at the health facility (From Q67)? (R***ead responses and check all that apply***)	1 = Long Wait 2 = Provider was not available 3 = Medications were not available 4 = Other (specify) _____ 5 = Don't Know	
70	Is it safer to use traditional remedies/ medicines than HIV medicines?	1 = Yes 2 = No 3 = If **Yes**, Why?	

		_____ 4 = If **No**, Why? _____	

vi. HIV Support Care

Now I want to ask you some questions about services you may have needed other than HIV Health care.

71	Have you ever got help from someone whose job is to assist you with things you may have needed to take care of your HIV, like finding a doctor, transportation, food?	1 = Yes 2 = NO	If NO got to # 73 and continue
72	How long after you tested positive did you get connected with someone whose job it was to help you with this kind of things?	1 = Less than 3 months 2 = 4 to 6 months 3 = 6 months to 1 year 4 = More than a year	
73	What do you think are the Most important things that should be done to connect someone who first tests positive for HIV to help them connect with someone whose job is to help with other things like, finding HIV doctor, transportation, food or other things like that?	Describe: _____ _____ _____ _____ _____ ____	
74	Beside HIV medical care, are there any other services you have needed in the past 6 months? [**Read responses, check all that apply]**	1 = HIV case management services 2 = Counseling about how to prevent the spread of HIV 3 = Professional help remembering to take my HIV medicines on time or correctly 4 = HIV peer group support 5 = Dental care 6 = Mental health services 7 = Drug or alcohol counseling or treatment 8 = Domestic violence services 9 = Shelter or housing services 10 = Meal or food services 11 = Home health services 12 = Transportation assistance 13 = Childcare services 14 = Interpreter services 15 = Nutritional Services 16 = Insurance enrollment assistance 17 = Other (please specify):	

		_____ _____ 18 None	
75	Are there any community services to support HIV/AIDS patients within your area? e.g. NGO, church activities, transport etc.	1 = Yes 2 = No 3 = if yes which one: list _____ _____ _____	
76	How would you feel about receiving HIV/Sexually transmitted diseases information/support in church/place of worship?	1 = Yes, I would be okay with it 2 = No, I would not be okay with 3 = it I don't go to church/place of worship 4 Please Explain: _____ _____ _____	
77	Are there barriers (things that get in the way) to receiving HIV support and/or treatment services in your community?	1 = Yes 2 = NO	
78	If yes in # 80, what are they? Check all that apply	1 = No transportation 2 = No services exist in my neighborhood 3 = Don't know where to go 4 = It takes too much time 5 = No health insurance 6 = Providers will judge me 7 = Other; _____ __ _____ __	
79	What are your recommendations /suggestions regarding areas of HIV support you would like to get more often?	Describe: _____ _____ _____ _____	
80	Do you prefer home-based care instead of regular visits to health care centers	1 = YES, how? _____ __ 2 = NO, why? _____	

		__	
81	If married or cohabitating: does your partner/spouse know that you are taking ART?	1 = Yes 2 = No 3 = Don't Know 4 = Not applicable	
82	Is it ever difficult for you take your ART when someone from your family can see you?	1 = Yes 2 = No	

SECTION C: ENABLING FACTORS

i. Accessibility and Availability of HIV Care and Support Services

83	How often do you visit your clinic?	_____ ___	
84	Which mode of transport do you use to go to the clinic?	_____ ___	
85	How long does it take you to travel to the clinic (*one way*)	_____ ___	
86	Thinking of access, how easy or difficult was is it for you to obtain the HIV care services you needed within the past 6 months? **Would you say it is?**	1 = Very difficult 2 = Somewhat difficult 3 = Somewhat easy 4 = Very easy	

87	Would you agree with the statement: **Information about available HIV health Care services** is ***(Answer options Yes, No, Unsure)***				
		YES	NO	UNSURE	
	a) Easy to find				
	b) Easily accessible				
	c) For people with disabilities				
	d) Easy to understand				
	e) Useful				
	f) Transparent on the financial (out-of-pocket) costs				
88	Over the past 6 months, have you experienced a significant delay in accessing HIV health care? ***(Answer options Yes, No, Not Applicable to ME)***				
		YES	NO	Not applicable to Me	
	a) HIV Medicines				

	b) A Treatment intervention e.g. surgery or other procedure				
	c) A test				
	d) An appointment with doctor/Nurse				
	e) Appointment with specialist				
	f) Help/support from social services				

89	Do you need any of the following issues when seeking HIV care and treatment? **(check all that apply)**			
		Yes	No	
	a) I need to go to another town to get the HIV service I need			
	b) I need to go to another region to get the service I need			
	c) I need to go to another country to get the service I need			
	d) None of the above			
90	To overcome geographical barriers to access HIV health care, do you have access to?			
		Yes	No	
	a) A mobile to help you access health care service remotely			
	b) Financial support for travel			
	c) Transportation			
	d) None of the above			
	e) Other: specify _____ _____ _____			

THANK YOU FOR YOUR TIME AND PARTICIPATION!

Appendix 3: Map of the Kenya showing the location of Baringo County

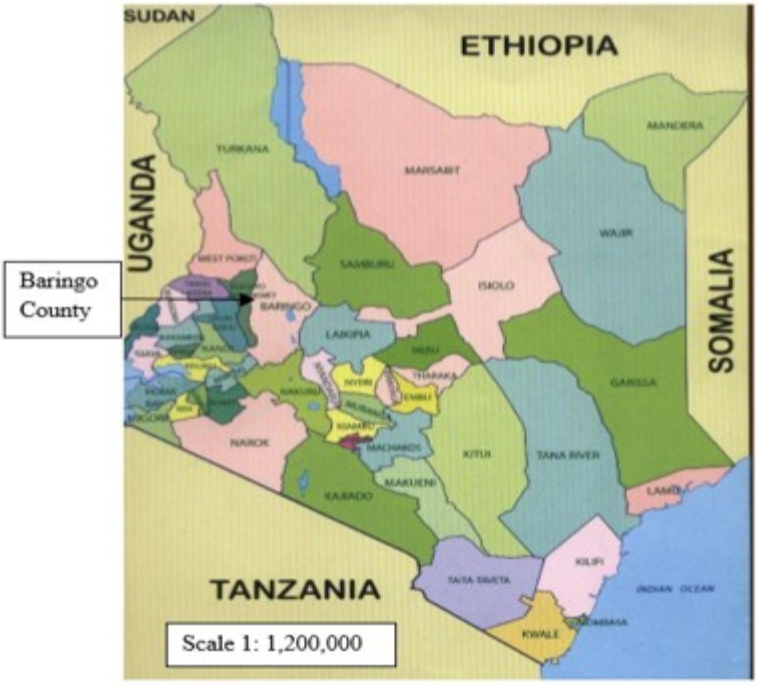


Figure 4: Map of Kenya Showing the location of Baringo County

(http: softkenya.com/county/47 counties in Kenya)

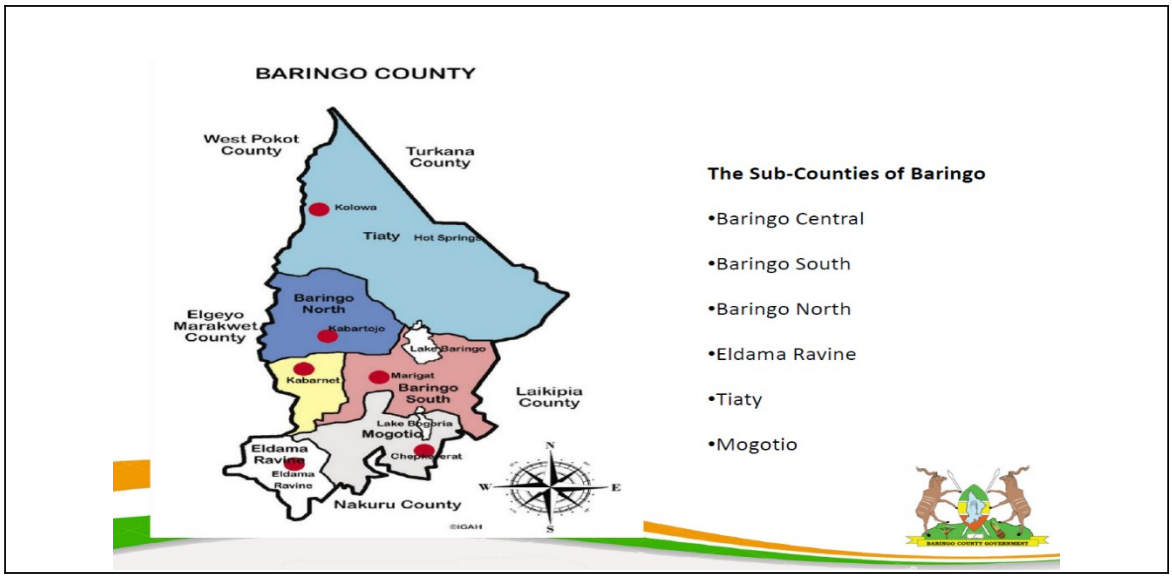
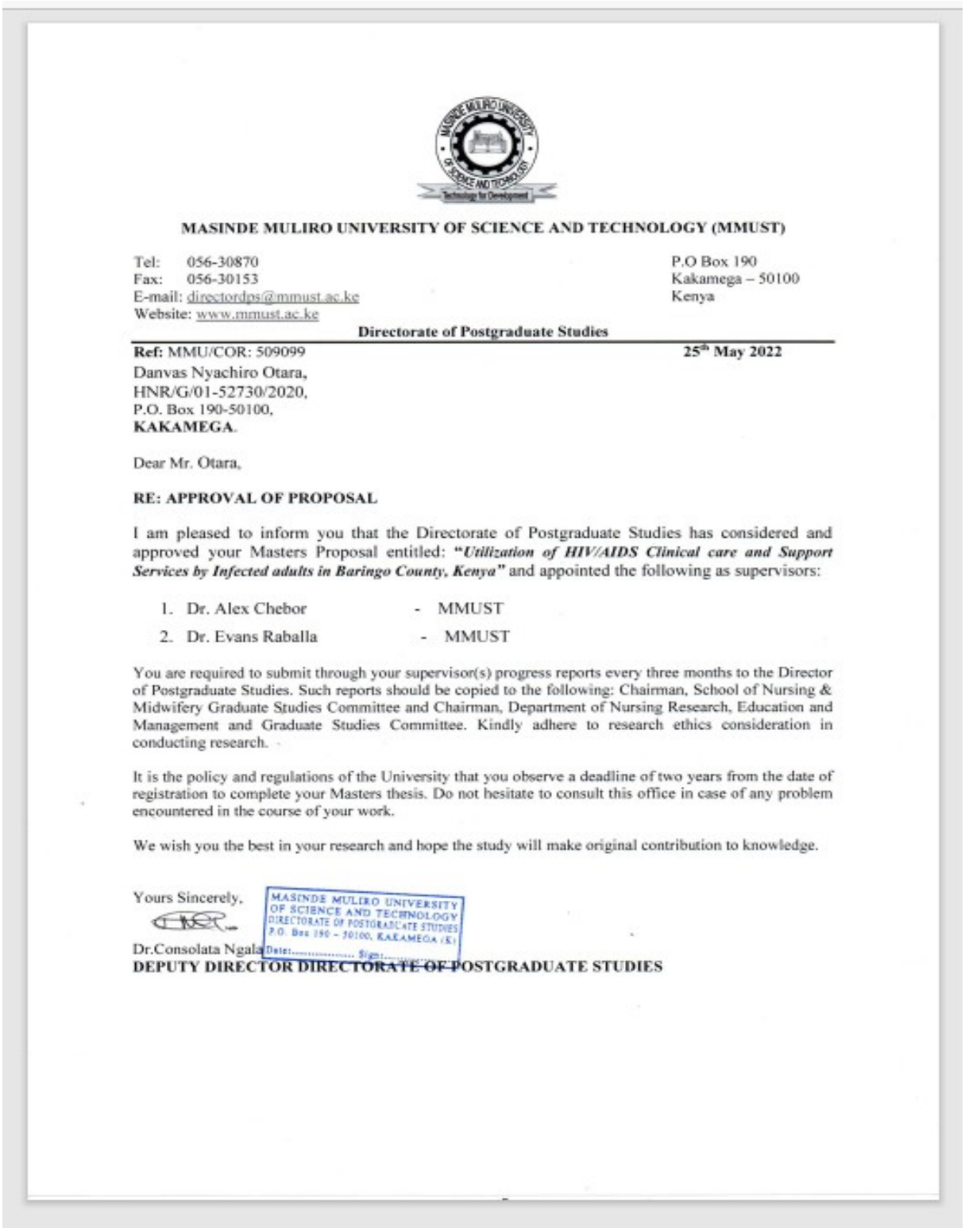


Figure 3.1: Map of Baringo County showing the study areas
(source: google maps)

Appendix 4: Approval by Director of Postgraduate Studies



MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

Tel: 056-30870
Fax: 056-30153
E-mail: directordps@mmust.ac.ke
Website: www.mmust.ac.ke

P.O Box 190
Kakamega – 50100
Kenya

Directorate of Postgraduate Studies

Ref: MMU/COR: 509099 **25th May 2022**

Danvas Nyachiro Otara,
HNR/G/01-52730/2020,
P.O. Box 190-50100,
KAKAMEGA.

Dear Mr. Otara,

RE: APPROVAL OF PROPOSAL

I am pleased to inform you that the Directorate of Postgraduate Studies has considered and approved your Masters Proposal entitled: ***"Utilization of HIV/AIDS Clinical care and Support Services by Infected adults in Baringo County, Kenya"*** and appointed the following as supervisors:

1. Dr. Alex Chebor - MMUST
2. Dr. Evans Raballa - MMUST

You are required to submit through your supervisor(s) progress reports every three months to the Director of Postgraduate Studies. Such reports should be copied to the following: Chairman, School of Nursing & Midwifery Graduate Studies Committee and Chairman, Department of Nursing Research, Education and Management and Graduate Studies Committee. Kindly adhere to research ethics consideration in conducting research.

It is the policy and regulations of the University that you observe a deadline of two years from the date of registration to complete your Masters thesis. Do not hesitate to consult this office in case of any problem encountered in the course of your work.

We wish you the best in your research and hope the study will make original contribution to knowledge.

Yours Sincerely,

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY DIRECTORATE OF POSTGRADUATE STUDIES P.O. Box 190 - 50100, KAKAMEGA (K)

Dr.Consolata Ngala Date:..... Sign:.....
DEPUTY DIRECTOR DIRECTORATE OF POSTGRADUATE STUDIES

Appendix 5: ISERC

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY

Tel: 056-31375
Fax: 056-30153
E-mail: ierc@mmust.ac.ke
Website: www.mmust.ac.ke

P. O. Box 190,
50100.
Kakamega,
KENYA

Institutional Scientific and Ethics Review Committee (ISERC)

REF: MMU/COR: 403012 Vol 6 (01)

Date: May 26th, 2022

To: Danvan Otara
Masinde Muliro University of Science and Technology.

Dear Sir.,

RE: UTILIZATION OF HIV/AIDS CLINICAL CARE AND SUPPORT SERVICES BY HIV INFECTED ADULTS IN BARINGO COUNTY, KENYA.

This is to inform you that the ***Masinde Muliro University of Science and Technology Institutional Scientific and Ethics Review Committee (MMUST-ISERC)*** has reviewed and approved your above research proposal. Your application approval number is **MMUST/IERC/063/2022.** The approval covers for the period between ***May 26th, 2022*** to ***May 26th, 2023.***

This approval is subject to compliance with the following requirements;

i. Only approved documents including informed consents, study instruments, MTA will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by ***MMUST-ISERC.***
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to ***MMUST-ISERC*** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to ***MMUST-ISERC*** within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to ***MMUST-ISERC***.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

Yours Sincerely,

Prof. Gordon Nguka (PhD)
Chairperson, Institutional Scientific and Ethics Review Committee

Copy to:
- The Secretary, National Bio-Ethics Committee
- Vice Chancellor
- DVC (PR&I)

Appendix 6: Research Authorization County

BARINGO COUNTY GOVERNMENT

Tel: 0722 741648
Email: cdhbaringo@gmail.com

County Director of Health
Preventive and Promotive Health
P.O. BOX 393-30400,
KABARNET

DEPARTMENT OF HEALTH SERVICES

REF: BCG/HS/RES/01/VOL.1/07 **DATE**: 26th July 2022

Danvas Nyachio Otara
Email: onyachion@gmail.com
Tel: 0725 469316
P.O Box 401 -30400
Kabarnet

Dear Danvas,

RE: RESEARCH AUTHORIZATION

Following your request for authority to carry out research on ***"Utilization of HIV/AIS Clinical Care and Support Services by HIV Infected Adults in Baringo County"***. "I am pleased to inform you that you have been authorized to conduct the research as indicated in your application.

By the copy of this letter, the Medical Superintendents of Baringo County Referral Hospital, Eldama Ravine SCH, Marigat SCH, Kabartonjo SCH and facility in-charge Tenges Health Centre are requested to accord you the necessary assistance.

Kindly note you shall submit a copy of your final research report to The County Director of Health Baringo County and a soft copy to be submitted through online research information system as this applies to any applicant who has been licensed by NACOSTI act 2013.

Thank you

Dr. Patrick Boruett
County Director of Health, Preventive and Promotive Health
BARINGO COUNTY

cc.

Director Medical Service, Baringo County

Appendix 7: NACOSTI LICENCE

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **963149**

Date of Issue: **22/June/2022**

RESEARCH LICENSE

This is to Certify that Mr.. Danvas Nyachio Otara of Masinde Muliro University of Science and Technology, has been licensed to conduct research in Baringo on the topic: UTILIZATION OF HIV/AIDS CLINICAL CARE AND SUPPORT SERVICES BY HIV INFECTED ADULTS IN BARINGO COUNTY, KENYA for the period ending : 22/June/2023.

License No: **NACOSTI/P/22/18099**

963149

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.