

**UNIVERSITY OF GHANA**



**ATTAINING THE 90-90-90 TARGETS: BARRIERS AND FACILITATORS TO  
RETENTION IN CARE AND ADHERENCE TO ANTIRETROVIRAL THERAPY  
IN A GHANAIAN REFERRAL HOSPITAL**

**PRESENTED**

**BY**

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PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MBA, HEALTH  
SERVICES MANAGEMENT.

**JUNE 2019**

**DECLARATION**

I, hereby, declare that this dissertation is the result of my own original research and that no part of this work has been presented for another degree in this university or elsewhere.

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DATE

**CERTIFICATION**

I, hereby, declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines and supervision of dissertation laid down by the University.

.....

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**DEDICATION**

I dedicate this research work to my beloved father, the late LT COL Awudu Rahman.

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## ABSTRACT

The surge in new cases of HIV infection has assumed significant global concern. The increase has resulted in high trends of patients on anti-retroviral treatment in hospitals, particularly in Sub-Saharan Africa including Ghana where more than 300,000 people are currently on ART. Even though targets, policies and efforts are being implemented to improve patients' adherence and continuance stay in care, HIV incidence is increasing in Ghana, especially among youth. This problem has been partly blamed on dearth of scholarly works on the issue, thus impeding effort towards the 90-90-90 targets. In order to contribute to policy and scholarly literature, this study explored facilitators and barriers to adherence and retention to ART among HIV patients at the Greater Accra Regional Hospital. This study was important because it provides adherence and retention policy recommendations to support Government and International organisations such as UNAIDS. Anderson Model of Healthcare Utilisation was used to underpin the study. Qualitative methods case study was employed.

The results show that, non-disclosure of status, socio-cultural relations, perceived improved medical condition, free medication, culture and religious orientation and support from health facility facilitate adherence to ART and retention in care. The study also found Model of Hopes play significant role as counselors, educators and hope models that visit patients at home, talk to them and encourage them to adhere. This has led to an improvement in adherence to ART among clients. The study also found that, older women who are not working adhere to treatment more than both working and non-working men. The study also noticed that, there is a gradual re-orientation where patients are not resorting to religious prayers, and spiritual assistance at the expense of ART. Financial, economic, stigma and religious related issues are barriers to adherence and retention among HIV patients.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the Study

In the last decades, scholars, policy makers and health practitioners have debated the causes, effects and solutions to the prevalence of Human Immune Virus (HIV) infection menace and its opportunistic deaths and ailment. Report from United Nations AIDS gap indicates that, over 35 million people around the world may be living with HIV/AIDS and out of this, about 19 million do not know if they have the disease (UNAIDS, 2014). The gap report further states that, just 10 nations in sub-Saharan African (SSA) contribute 56% of the total number of people with the virus. The Ghana AIDS Commission, (2013), report that, as at 2013, 260,000 Ghanaian were living with Human Immune Virus.

The surge in global HIV/AIDS statistics leaves many scholars and practitioners wondering how the spread can be controlled and contained at the patient level. Kranser et al. (2011) explain that, an improvement in HIV care management strategies is crucial to ensure patients retention and adherence to Antiretroviral Therapy for people living with the disease (Kranser, et al., 2011). Antiretroviral Therapy reduces overall infection, incidence, and related deaths and improves quality of life patients living with the virus. For decades, issues of retention and adherence to ART, even though have barriers to full compliance, have featured significantly in HIV patient care management efficiency architecture and studies. Adherence and retention in HIV care is described as a continuous engagement with medical care at a healthcare facility after initial entry

into the system. It is the ability of the patient to fulfill at least two clinic visits during a calendar year spaced at least 2-6 months. (Bezabhe, Chalmers, Bereznicki...Kassie et al., 2014).

In Sub-Saharan Africa about 8 million HIV positive patients were on ART between 2004 and 2011 (Kranser et al., 2011). Jahn et al. (2008) noted that, access to ART has contributed to a reduction in HIV-associated morbidity and mortality in Sub-Saharan region. In Ghana also, some significant level of successes has been recorded with regards to ART coverage of 54% (Unit, 2001). In 2016, Ghana adopted the 2020 UNAIDS/WHO 90-90-90 target in a bid to end HIV epidemic by 2030. World Health Organisation (2017) explains that, Retention in HIV care and Adherence to ART, though are different, share similar barriers and facilitators (WHO, 2017).

Ghana Demographic and Health Service (GDHS 2014) reports that, “Ghana is classified as having a generalized HIV epidemic where HIV prevalence in the country has remained on average around 2% in adults 15-49 years”. With Antiretroviral therapy coverage for Ghana standing at 54% (Unit, 2001), the researcher believes that, the barriers and facilitators to Retention in HIV care and Adherence to ART must be identified in order to help scale up the number of HIV positive persons retained in care and adhere to antiretroviral therapy.

Emerging literature indicates that, negative stigma, depression, lack of awareness of importance of care, depression, location and poor access to transportation are likely to hinder the retention to HIV care and adherence to ART (Abdulai, 2016). On the other hand, issues such as friendly client-provider relationship and reminders of clinic days have also been identified as factors that facilitate retention in HIV care and adherence to ART. Other emerging studies have begun to analyse these barriers and facilitators from patients and environmental perspective, thus creating wider avenue for more investigation (Abuogi et al,2016)..

Adherence to a medication is a dynamic behaviour influenced by many factors. Studies in resource-limited settings show that “major facilitators of ART adherence encompass social support, positive treatment outcomes, and life-long projects. Factors such as access to health facilities, transport costs, and fear of stigma and discrimination are recognized barriers to adherence with ART” (Bezabhe. et al., 2014). This study seeks to explore from the perspective of HIV patients, the barriers to Retention in HIV care as well as Adherence to ART. The studies seeks to provide innovative HIV care management solutions to minimize the risk of opportunistic infection, reduces the risk of HIV transmission and reduce HIV-associated morbidity and mortality in Ghana.

## **1.2 Problem Statement**

The World Health Organization has described HIV patient retention in care as an important indicator for efficiency of any HIV management program. Despite the effort of global health organisations to improve patient retention in care, the trend and statistics in Sub-Saharan Africa is falling. The Globally average retention rate at 12 months after initiation of ART is 81%. A meta-analysis showed that in Sub-Saharan Africa, the retention rate after 12 months of starting ART was 77% below the global threshold. A study done by Korle (2016) discovered that the retention rate in HIV care at the International health Care Centre in Accra, Ghana is 55% which is also below the global and African levels. It has been 2 years since Ghana adopted the 2020 UNADS/WHO 90-90-90 targets.

However, the country is performing at 57%, 39% and 64% with regards to the first, second and third 90 respectively compared to the worldwide performance of 75%, 79% and 81% respectively (UNAIDS,2017). Suboptimal adherence and retention in care can lead to viral

resistance to first line ART. This poses a risk in countries where there may be limited supply of second and third line antiretroviral drugs. This may result in poor viral suppression which increases the risk of HIV transmission, increases the risk of opportunistic infection and decreases the survival rate of persons living with HIV (WHO, 2017). This subsequently derails the national as well as global efforts at achieving the 909090 targets by 2020 (UNAIDS 2017).

Even though studies have examined the barriers to retention and adherence to HIV care ART (Bezabhe et al., 2014 ; Abuogi et al., 2016; Asmare et al., 2014), the researcher has identified very few studies in Ghana that has explored barriers and facilitators of adherence to ART and retention to HIV care. For instance, studies done in Europe, USA and other African countries such as Ethiopia reports various barriers such as Financial constraints, distance to ART clinics, patient load, patients' beliefs, and alcohol and drug use as barriers to retention. However, there is dearth of studies on retention in HIV care and adherence to ART in Ghana. This study therefore aims to determine the barriers and facilitators of adherence and retention to ART.

“Previous studies mainly focused on exploring factors influencing patient retention at the healthcare level and were limited in their ability to identify barriers to, and facilitators of medication adherence at the individual patient level” (Bezabhe et al., 2014). This limited the understanding of the barriers and facilitators of adherence and retention to HIV care from the perspective of the patients. Therefore, this study focuses of HIV clients of the GARH who are accessing ART from the hospital.

### **1.3 Purpose of Study**

Based on the gaps identified, the study seeks to explore the barriers and facilitators of adherence to ART and retention to care among HIV positive in Greater Accra Regional Hospital.

### **1.4 Research Objectives**

In order to pursue the overall aim and purpose of this study, the following specific objectives have been set;

1. To explore facilitators and barriers to patients' adherence to ART and retention in care.
2. To explore ways by which patient retention and adherence may be improved in order to meet the 90-90-90 target.

### **1.5 Significance of the Research**

Findings from this investigation provide knowledge to help health policy makers and practitioners fashion out strategies to strengthen patient adherence and retention in ART care. Health practitioners will understand the challenges that patient encounter that prevent their adherence and retention in HIV care and the measure that can facilitate their retention and adherence to ART.

This investigation will support and feed into the 909090 Agenda of Government towards ensuring eliminating HIV epidemic by 2030. By this, the findings will support the, the National Strategic Policy 2016-2020 approach towards achieving the results. In effect, this study will support the HIV/AIDS investment framework which identified adherence to ART and retention to HIV care as critical components of the NSP 2016-2020.

The study investigates factors which affect adherence to ART from the individual perspective, social and service delivery aspects which impede or aid ART adherence. Exposure to these important elements in adherence to medication may provide insight into the dynamics of ART adherence and gaps which need to be addressed.

Feedback from the study may provide challenges faced by the initiative and suggest ways to address them. Ghana AIDS Commission, Ministry of Health and Ghana Health Service may adopt suggestions to ensure access to ART and dealing with HIV and AIDS issues. This study also serves as additional source of knowledge to HIV/AIDS literature, most specifically on literature of facilitators and barriers to adherence to ART and retention in care in Ghana.

## **1.6 Delimitation**

Despite the contributions of this study to policy, management and literature the study is limited in terms of the respondents and place or context of investigation. This study focuses on only HIV patients in a Greater Accra Regional referral hospital. This means that, patients outside this scope were not considered, thus limiting wider understanding on the issue.

## **1.7 Disposition of Chapter**

This long essay is organized in five main chapters from chapter one to chapter five. Chapter one focuses on the general overview of the study comprising the introduction, problem statement, research questions, research objectives and the importance of the investigation. Chapter two reviews literature related to the research topic. Chapter three discusses the methodology of the study. The chapter also provides some description element of the study location, profile and how the study objectives will be analysis. Chapter four present the research findings. In chapter five

of the report presents the key issues in a form of summary. It also provides conclusions and recommendations for managerial, practical and policy direction.

## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

#### 2.1 Introduction

This chapter of the study presents a discussion of the issues under investigation. This study sought to investigate the facilitators and barriers to ART Adherence and retention to HIV care. The current chapter reviews literature on HIV prevalence in Ghana, the 90-90-90 targets and Ghana's achievement, barriers and facilitators of ART adherence and retention in care. The chapter also presents a discussion on the patients' perception of ART. The chapter concludes with some empirical literature on the barriers and facilitators of ART.

#### 2.2 Overview of HIV AIDS Pandemic

The HIV/AIDS epidemic was first identified among gays in Los Angeles in 1981. Human Immunodeficiency Virus (HIV) is the virus that causes Acquired Immune-Deficiency Syndrome (AIDS). The virus enters the human body and weakens the immune system and progresses to a full blown AIDS, which eventually destroy the immune cells. Uncontrolled condition creates other opportunistic infections such as TB, bacterial, cancers and viral conditions leading (Ghana Health Service, 2005). The epidemic shortens lifespan, illness and suffering, loss of income, increase number of orphans, negatively impacting on the economy (Ghana Health Service, 2005). Since the disease was discovered in 1981, report shows that as at 2015, an estimated number of 36.7 million individuals living with the disease (UNAIDS, 2016) of which more than 90% live in low and middle income countries (Alvarez-Uria, et al., 2013).

Sub-Saharan Africa is considered as the continent most hit with the HIV/AIDS pandemic (UNAIDS, 2014). Report from UNAIDS in 2016 shows that, “over 36 million people living with HIV globally, about 24 million are living in sub-Saharan Africa. HIV/AIDS has therefore become the leading cause of death in Africa and the fourth leading cause of death worldwide” (Lourenço, et al., 2016a).

In Ghana, HIV/AIDS case was first recorded in 1986. Over the years, the Government of Ghana has responded the pandemic: creating enabling environment at the national, regional, district and sub-district levels to control the spread of the disease. The HIV/AIDS epidemic has exhibited a different pattern from that found in many other parts of sub-Saharan Africa due to the government’s efforts towards its reduction and eradication. The Government of Ghana through Ghana Aids Commission has signed or subscribed to a number of continental and international HIV control programmes, which led to stabilizing levels of HIV/AIDS records.

Currently, Government of Ghana through Ghana Aids commissions subsidizes the cost of care including ART by nearly 90%, making it available at roughly \$5 per month (GAC, 2013). HIV prevalence is lowest amongst the poor and unemployed with increase prevalence amongst the educated and working class group (UNAIDS 2013). This is in line with the United Nations General Assembly Special Session on HIV/AIDS (UNGASS) in 2001 set global targets for reducing the spread of the disease and lessening its effect on the world by 2020. This calls for effective diagnoses of all people living with HIV, provide antiretroviral therapy (ART) for all diagnosed patients and achieving viral suppression from adherence (Medlock, et al., 2017).

About \$16.8 billion has so far been committed in fighting this global pandemic and 89% of this investment is allocated to treatment, care and support of HIV infected people in low- and middle-income countries (Alemnji et al., 2014).

### **2.3 90-90-90 Targets: Ghana's Achievement so Far**

Since the intervention of antiretroviral therapy (ART), persons living with HIV have healthier and longer life spans. It is now possible for ART to reduce viral load to the point where an infected person is no longer, or much less, infectious to others. Treatment as a prevention strategy is a basic factor of the post-2015 UNAIDS global Fast-Track strategy to end AIDS as a public health concern by 2030 with 90-90-90 targets.

The first 90 of the target lines state that 90% of HIV positive individuals should know their status. The second 90 is that 90% of those who know their status must be on treatment and the third 90 is that 90% of those on treatment must have viral suppression. The strategy aims by 2020 to have 90% of all people living with HIV to know their HIV status; 90% of all people with diagnosed HIV infection receiving sustained ART, and; 90% of all people receiving ART to have viral suppression. Data from World Health Organisation show that many HIV positive individuals do not receive consistent ART (World Health Organisation, 2017). Statistics also show that, as at 2017, only 59% of adults, 52% of children and 80% of pregnant and breast feeding women with HIV were on ART (World Health Organisation 2017). ART has been available in Ghana since June 2003 and the number of ART sites has increased from 175 to 197 in 145 districts out of the 216 districts (Korley, 2016).

According to Abdulai (2016), Ghana has made modest gains in the last two decades in terms of national HIV response: new HIV infections have been going down and more people are getting access to life-saving antiretroviral medicines. 2015 report by UNAIDS shows that HIV prevalence is still high in Ghana, and there are still many challenges to changing this situation (Paper & Flat, 2017). In 2017, World Health Organisation reported that, countries aiming to

achieve the 90-90-90 target must focus of improving Retention in care and adherence to antiretroviral therapy in the HIV care continuum (World Health Organisation, 2017). The Report further noted that, these important concept are essential is countries are to achieve targets. Even though there are signs of successes in the management of HIV care, data from World Health Organisation show that, HIV positive individuals do not receive consistent ART. This hinders the aim of the 90-90-90 target of ensuring that 90% of HIV positive individuals know their status, treatment and have viral suppression.

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#### **2.4 Antiretroviral Therapy and Perception of HIV Patients**

According to WHO (2017), Anti-Retroviral Therapy (ART) is the use of medicines (Anti-Retroviral Drugs) to reduce or suppress the viral load in the blood of persons living with HIV. It is the use of a combination of HIV and AIDS drugs that have specific inhibitory effects on HIV replication. According to Imran and Nasir (2015), the medicines used in ART do not cure the disease but significantly slows down the growth of the virus. Ministry of Health/Ghana Health Service (2010) explains that, patient start ART have a CD4 count below 350 cells/ml.

Accessing ART is expensive, depriving many people from accessing the Therapy. Many governments are making effort to ensure that the therapy/services become affordable, especially for low income earners and countries (World Health Organization, 2017). This retards the spread of the disease (World Health Organization, 2017). As at December 2016, more than 19.5 million individuals living the disease were under treatment, thus reducing related that to about 1.1 million in 2015, about 45% reduction since 2005 (WHO, 2015). About 12 million reside in sub-Saharan Africa and 2 million in Asia, the two regions most affected by the HIV epidemic (UNAIDS, 2016c). Persons accessing ART is growing, showing positive signs that the global target of 30 million is likely to be met in 2020 (UNAIDS, 2017).

The UNAIDS in 2013 reported a fall of AIDS-related deaths by 35% since 2005, and this is attributed mainly to the availability of anti-retroviral therapy programs. It is also estimated that about 87% of Africans with HIV who are aware of their status are currently receiving antiretroviral therapy (ART), and nearly 76% of them have viral suppression (UNAIDS, 2013). Evidence of viral suppression after continuous use of Vaccines emphasizes the relevance of ART care (UNAIDS 2017). Proper management of other related opportunistic infections significantly help ensure maximum care for people living with the disease (AIDS Info, 2017). It is therefore important, that, care givers develop deeper knowledge of the opportunistic infections such as TB and Hepatitis in order to help them deal with them.

The Ghana AIDS Commission's (GAC) report for 2013 indicated that 140,000 people were on ART. "Antiretroviral therapy was not part of Ghana's public health care system until June 2003. The Health Ministry earmarked two places in the Manya Krobo district as pilot sites. The treatment included counseling and testing, management of sexually transmitted diseases and prevention of mother to child transmission". It was realized that the therapy had made

improvements in the management of the disease at the pilot sites. To ensure a reduction in the spread and mortality caused by the disease, treatment sites were expanded. The number of ART centers or treatment sites has increased from 175 in 2013 to 197 in 2015 (Abdulai, 2016). The introduction of combination ART including protease inhibitors has resulted in a fall in HIV-related death. The key to the success of the ART is the ability and willingness of persons living with the disease to adhere to complex ART regimens, and at least 95% adherence is required for ART regimens to be fully effective (Asmare, et al., 2014).

## **2.5 Retention in HIV Care and Adherence to ART**

Retention in care is the most challenging step along the HIV care continuum. Many patients who achieve viral suppression while in care experience interruptions characterized by continuous moving in and out of care. This is because, as the number of ART patients increases, retaining patients in care becomes a major challenge especially in low resource countries. In sub-Saharan Africa, the mean retention rate has decreased over time as reported by systematic reviews and meta-analysis studies (Matyanga, et al., 2016).

A number of studies have also reported higher retention rates across sub-Saharan Africa. In a meta-analysis review including 78,424 infected children from over 30 countries to assess the retention of HIV infected children in the first twelve (12) months of ART and predictors of attrition in resource-limited setting, retention rate was between 71%-95% (Abuogi, Smith, & McFarland, 2016). Another study reported a retention rate of 84.4% at twelve (12) months among persons living with the disease (Saag, et al., 2018).

The ART has dramatically reduced morbidity, mortality and infectiousness of persons living with HIV (UNAIDS, 2016c). Consistently high levels of adherence to ART are essential for

sustained viral suppression, thus preventing drug resistance (Gardner, et al., 2009) and disease progression (Bangsberg et al., 2001). The Joint United Nations Programme on HIV/AIDS (UNAIDS) 90–90–90 global treatment targets emphasize sustained viral suppression and therewith the need for optimal adherence to ART and HIV care (UNAIDS, 2014b). Scholars, not that appreciating the determinants of adherence to ART in a settings with the highest disease burden will be critical to attaining these targets (O’Connor, et al., 2013). Short-term data from low-resource countries, concerns remain that long-term adherence may be suboptimal due to multiple barriers such as lack of basic health education in massive ART programmes with limited capacity for monitoring (Safren, et al., 2014).

On Adherence, Simoni et al. (2003), explain that, adherence as “the ability of the person living with HIV/AIDS to be involved in choosing, starting, managing, and maintaining a given therapeutic combination of medication regimen to control viral (HIV) replication and improve immune function”. “The various definitions of adherence to treatment suggest that adherence relies on the patient as well as the health professional. Health professionals are to communicate effectively with patients in terms of how to take medications as well as other recommendations associated with the drugs”. The patient on the other hand, must understand the process and accept to comply with directives given. Adherence in this study is defined as the willingness of an individual to take medication as directed by the health service provider and comply with treatment requirements. Adherence to medication entails taking prescribed dosage at the scheduled time and keeping clinic appointments.

For people living with HIV, adherence to ART is important to reduce the spread of the virus. The nature of the virus is such that it multiplies and mutates rapidly enabling it to overcome the immune system. “As a result of this, very high drug compliance is necessary to reduce the

chance of the virus becoming drug resistant. This hinders future treatment options for the disease, making it hard for clients to treat infections” (Chesney, 2000). The required adherence level for a successful treatment outcomes is 95% and above (Lima et al., 2008; Paterson et al., 2000). This makes antiretroviral therapy very important to ensure reduced morbidity and mortality (Machtinger & Bangsberg, 2006).

## **2.6 Barriers and Facilitators of Adherence and Retention to ART**

Persons living with HIV are faced with numerous challenges that inhibit adherence and retention to ART. Similarly, these challenges when properly addressed can serve as facilitators to support adherence and retention to ART by persons living with HIV. These factors are grouped into medical related or patient factors, socio-economic situation of the client. Based on the Anderson Model of Health Care Utilization, this study discusses the barriers and facilitators of adherence and retention in ART from medical related or patient factors, socio-economic views.

### **2.6.1 Transport Cost**

Another factor that can either facilitate or inhibit adherence and retention to ART is cost of transportation. This factor is closely linked with income (Tuller et al., 2010). In environmental setting where transportation cost is low or income is moderate, patient are able to constantly visit and continue their ART. The opposite is true where the cost of transportation is high but income is low. In Ghana, people living with HIV are compelled to cancel appointments to ART centers for medication and treatment due to the issue of transportation (Tuller, et al., 2010). It is evident that, the closer the ART center is to the patients home, the less the stress and cost to reach it and thus increasing chance of visits. Funds that are set aside for transportation are at times channeled to other areas like purchase of food to feed the family and also pay school fees of their children.

The high cost of transportation constrained adherence and retention to treatment (Kagee et al., 2007).

Skovdal et al. (2011) noted that transportation cost is affected by the location of the ART centre. They added that, long distance to the ART clinic may be a barrier to patients accessing ART because of inability to raise money for transportation. According to Kagee et al. (2011 p. 32), “people were not motivated to go for ART services when clinics were far from patients’ place of residence”. By this, if service delivery facilities are too far, poor clients who usually walk to such facilities will most likely not to continue anytime they feel tired. In a qualitative research with patients on ART in south western Uganda, these researchers identified transportation cost as a key barrier to accessing ART services. They further showed that, patient access ART struggled to meet clinical appointments because they are unable to raise funds to transport themselves to and fro the clinic. To address this barrier and facilitate adherence and retention to ART, they suggested that several interventions is required to help patient adhere and sustain ART (Tuller et al., 2010).

### **2.6.2 Family Support**

Support from family and social groups can either support or hinder adherence and retention to ART. In social environment, the family is seen as a strong tool where hope, love and reassurance is obtained. According to Murphy et al. (2000), the responsibility of family care givers on adherence and retention to ART is an important component to promote adherence to ART among persons living with HIV and AIDS. Murphy et al. (2000), identified that, providing access, knowledge and motivation to people living with HIV as key components of promoting adherence and retention to ART. For instance, patients who disclose their status to their family have

sustained support systems, experience reduced stigma and discrimination and also feel a sense of belonging. In this way, family members and social groups like partners, siblings, parents and friends to remind him/her of the keep track of appointment days, serve as a morale booster and such relatives could even help pick up medications during ill health (Waldrop-valverde, et al., 2015).

Kunutsor et al. (2010) explained that, lack of support is one of the reasons why people default and discontinue ART. The added that, adherence to ART would be affected if support from relatives was not forth coming. Unwillingness to take medication in public or in the watch of family and friends was a barrier to adherence of medication (Murphy, et al., 2000). Literature further conclude that, researchers then concluded that patients who lack support would most likely default ART but good social support predicts better adherence (Afolabi, Afolabi, MA, & Olowookere, 2013).

### **2.6.3 Education Status**

The level of literacy among people or patient can significantly influence adherence or default to ART (Flynn, et al., 2017). It is expected that, high literacy of HIV treatment by patients could also lead to improved retention. A study among Indonesian HIV positive patients indicated that those who had adequate retention had knowledge on HIV, and this includes using the internet to access some form of HIV information (Nugroho, et al., 2018). Posse and Baltussen, (2009) also asserted that patient will adhere if information provided at the health facility is clearly understood. Sabin et al. (2014) added that, patient admission and clear general knowledge about the disease enhances adherence and retention to treatment.

On the contrary, low educational level has been associated with non-adherence to ART in some studies (Gokran, et al., 2012). Patient with low literacy tend to view ART as only a tertiary measure and not prophylactic measure. They believe that unless health deteriorates, there is no need visiting health centre for treatment or continuing treatment. Another study conducted by Kagee et al., (2011) found out that health literacy influenced pill taking and clinic attendance. Clients were less informed about the medication regimen and this affected their compliance to treatment. In affirmation of this, a study carried out on the effect of knowledge, attitudes and beliefs on HIV in South Africa proved that knowledge about effects of non-adherence to ART had positive influence on adherence (Nachega, et al., 2005).

#### **2.6.4 Age and Gender**

The gender of patients has been cited as a factor contributing to defaulting or adherence to ART (Sabin, et al., 2014). According to Sabin et al. (2014 p. 43), the barriers to adherence and retention ART are different among men and women. Women in most cultural settings are expected to live a chaste life therefore an HIV positive woman is looked upon as having deviated from some moral standards. Men in most cultural settings are permitted to marry more than one so if a man shows certain behaviors, they are accepted. A man who acquires HIV may be seen as unlucky and not a social deviant. That is why women and men may experience different forms of stigma. Notwithstanding this, men and women may have different level of adherence depending on the kind of support one receives.

Stigma faced by women affects their adherence to ART and access to healthcare (Carr & Gramling, 2004; Bailey et al., 2014). Women tend not to be motivated to take drug regimen. Some also are unable to seek regular medical attention because of the social ridicule that comes

with attending ART. A qualitative study carried out on adherence to ART recommended that there should be more HIV and AIDS programmes and interventions to enable women adhere to treatment (Roberts & Mann, 2000; Roberts 2000).

Age is also another factor that is likely to facilitate or inhibit adherence and retention to ART. Some studies also found age as an influence on adherence to ART. These studies associated non-adherence to young people (Tufano, et al., 2014). Empirical study of Lourenço et al. (2016) examined the factors relating to retention amongst 185 patients seeking care at a hospital. Their study indicated that males were more likely to continue ART care than women. The study further found that, patients under 40 years of age had a higher chance of being retained in care compared to other age groups.

#### **2.6.5 Socio-cultural beliefs**

Some social and cultural factors and orientation of persons living with HIV may influence the person's adherence of defaulting of ART. Socio-cultural orientations are the religious faith and persuasions of a person. The African society has a lot of traditional healing practices. Traditional Health Practitioners play a vital role in health service delivery especially in resource constrained areas. The trust in these practitioners sometimes affects the ability of clients to adhere to treatment. According to Clive et al. (2011), "some people visit their traditional priests for consultation where local treatments are first employed". Some individuals hold religious faith such as Hindu and Islam that requires fasting at some periods which means that such individuals who are patients cannot take their medication (Clive, et al., 2011).

In a cross sectional study to determine factors influencing adherence to ART in Nepal, religion and culture were identified as some of the barriers to people not adhering to their medications

(Wasti et al., 2012). Their study added that, persons living with HIV should abide by their local traditional and religious beliefs. This assertion was supported by Joglekar et al. (2011), who explained that, attending socio-cultural and religious activities are major events that must not be missed, and thus such persons are likely to miss appointment dates.

There are also several myths surrounding the HIV/AIDS where some communities believe that the disease is spiritual and is visited on people who have offended the gods. Others also believe that, the disease can be transmitted through witchcraft. The person may not accept orthodox method of treatment once he believes infection was by spiritual means, hence affecting adherence to treatment (Walker, et al., 2004). Walker et al., 2004 as cited by Kagee et al., 2011, “argued that despite the fact that traditional healers’ treatment compliments biomedicine, they may distort the adherence process. The cultural setting permits the healers to provide attractive services like cure for all illness creating some sort of uncertainties about the efficacy or effectiveness of ART”.

### **2.6.6 Stigmatization**

According to Treves-Kagan et al. (2015), proving ART alone may not end HIV-related stigma. These authors added that persons living with HIV are hesitant to seek, adhere and retain care for fear of discrimination and prejudice. Some persons seeking care tend to conceal or postpone their ART to prevent friends and loved ones for discriminating them. Treves-Kagan et al. (2015) pointed out that, the problem of stigmatization can be eliminated by increasing cultural acceptance of being seropositive, integrating HIV care into general primary care and normalizing men and youths’ accessing health care. From similar perspective, other investigations have found

evidence that, adherence ART is ma by the patient's motivation, participation and psychosocial responses to ART (Skovdal, et al., 2011).

Studies in Tanzania show that, the problem of persistent stigmatizing persons living with HIV was a main drawback to treatment compliance (Mshana, et al., 2006). According to Padarath, Searle and Esu-Williams (2006), stigma in the family and community was an obstacle to testing and treatment of HIV and AIDS. Participants in their study reported difficulty in disclosing their status for fear of stigma and discrimination. A similar study by Kagee and Delport (2010) identified that, “if patients were seen by their family members or colleagues taking ART drugs or attending clinic, it could subject them to stigma and discrimination. To avoid this client’s preferred seeking care far away and waited till no one was watching before taking medication. In a focus group discussion”, Kagee et al. (2011) reported that, participants admitted that disclosure of status and stigma that accompanied it had influence on taking drugs).

### **2.6.7 Marital status**

The issue of marital status has also been considered as a factor contributing to adherence or ART defaulting (Clive, et al., 2011). Clive et al. (2011), observe that single women are more likely to default compared to the married ones. Their study found that, married persons have more cohesion and social support from the partner as compared with single persons who have no support. Sabin et al. (2014), further explained that, married person living with the HIV and accessing ART is likely to have financial and other related support from the partner. The partner may remind him/her of appointment time and also provide encouragement and financial support.

### **2.6.8 Medication Scheduling and Waiting Time**

Appointment and medication scheduling or clinic days given to ART clients for refill is another important factor which influence ART adherence. Individual on ART are likely to adhere to ART when waiting time at the ART clinic is less and are likely to default ART when they are delayed (Clive, et al., 2011 Kagee, et al., 2011). Some studies explain that, social activities of patient are likely to affect visiting clinic for medication refills (Kunutsor et al., 2010). They added that, when appointment days for visit coincided with social activities or work of the patient were usually not honored. Kunutsor et al. (2010) indicated that, flexible and convenient appointment time as well as support from trusted family members to pick medicines for them can help adherence and retention in care persons on ART. This observation is consistent the work of Hardon et al. (2007) who found waiting time as a major determinant in ART defaulting especially in public health facilities in Uganda, Tanzania and Botswana. The study recorded that, mean waiting times of 5 hours, 4 hours and 5 hours respectively for these countries were long enough and discourage person from visiting such facilities again (Hardon, et al., 2007).

### **2.6.9 Attitude of Healthcare Providers**

One important healthcare provider factors likely to affect adherence or retention in care for persons on ART is the level of relationship and attitude from healthcare providers (Kip et al., 2009; Treves-Kagan, et al., 2015). For instance, some studies found that the service-centered barriers include nurses' attitudes and knowledge, health workers' inability to conduct home visits and to contact defaulters, limited clinic hours, delays in getting CD4 and viral-load results (Kip et al., 2009). Positive health outcomes at times depend on the relationship between health care givers and the person accessing treatment. Health workers who communicate effectively with

patient and also show respect by informing clients processes and time involve in the treatment. In the case of chronic diseases' management, there has to be a friendly approach to clients to enable them accept treatment procedure and comply.

Effective interaction between clients and healthcare givers create open platform for engagement and understanding. The ability of clients to win the hearts of health workers has an effect on drug compliance and total health outcomes. The study of Murphy et al. (2000) discovered that the relationship between clients and health providers was a significant influence on adherence to ART. Some studies report that, discrimination at the point of service delivery was a major barrier to treatment of HIV and AIDS (Beattie & Bhattacharjee, 2009). Findings from Padarath, Searle and Esu-Williams (2006) also found some evidence that, too many trips to the hospital, inappropriate conduct of health professionals and delay in treatment to be major barriers to adherence and retention in care for persons accessing ART.

#### **2.6.10 Logistics availability**

Logistical issues have also been cited as some of the reasons behind lack adherence and retention to ART (Miller et al., 2010). For instance, lack of supply or irregular supply of drugs and other related suppliers will make ART adherence ineffective. ART adherence and retention is effective when there is availability of drugs and logistics for management and care givers to discharge to manage persons living with the disease. In countries where resources are constrained, government and healthcare facilities are unable to provide regular drug and logistics supply. There are instances of severe drug shortages in some health facilities which make it hard for client to continue treatment, hence disrupting treatment (Patel, et al., 2010). The study of Miller et al. (2010), examined why ART treatment patients were lost to follow up. They reported that,

there are instance of loss of clinic cards, transfer papers and proof of travel which prevent patients from going back to the hospitals. Complicated, consistent and cumbersome referral and transfer system and processes also serve as barrier to adherence and retention to ART.

#### **2.6.11 Case Management Services**

Supporting patients living with HIV manage their condition with services like counseling, nutritional support and mental health services provided by ART centers helps in improved CD4 counts and related outcomes like retention in care. A study by Sarfo et al.,(2017) indicated that, case management support services are associated with improved CD4 counts of patients receiving care at the antiretroviral clinic of Pantang Hospital in Ghana (Sarfo, Vanderpuye, Addison, & Nyasulu, 2017). Some of these support services includes counseling, mental health, and case management services improved CD4 counts in patients receiving ART. It is anticipated that nutritional counseling would be an integral component of support services that HIV/AIDS patients should receive at ART clinics as it indirectly relates to retention in care by improving CD4 counts. Additionally, due to the effect HIV diagnosis has on mental health of the patient, the introduction of HIV counseling and other mental health care services at facilities has been found to be associated with improved retention in care for PLHIV (Saag et al., 2018).

#### **2.6.12 Commitment**

The level of commitment of the individual living with HIV and receiving care to follow treatment plan is vital. If the individual fails to accept the disease condition and make a decision to work towards its successful medication, treatment will not be effective. Usually, general drug compliance is influenced by factors associated with the individual. Forgarty et al. (2002) explained that, daily activities can make people forget to take their medication or leave them

behind. For instance, emergency travel can make patients forget their drugs. Also, people may sleep through dose times so they are unable to take all the required doses. Forgarty et al., (2002), also stated that some people simply get fed up with the drug regimen and stop taking the drugs. A study in Nigeria also attested that non-adherence was a problem in the clinic under study. The main barriers that influenced adherence to ART were; feeling of being healthy, forgetfulness, and reluctance to disclose status (Olowookere, et al., 2008)

## **2.7 The Andersen Model of Health Care Utilization**

This model is commonly used to assess the factors that affect a patient's utilization of health services. An individual's access to and use of health services is grouped under two main factors. These are environmental and patient factors. Environmental factors include external factors such as competing life activities and health care environment such as empathy. The patient factors are predisposing, enabling and need factors.

Patient related factors have a socio-demographic component (age, sex, education, marital status, socio economic status, religion and distance to facility (Baitsh et al., 2012; Tesfaye et al., 2018). These factors could play a major role in determining ART adherence. The medical related factors such as the side effects of medicines, and the length of time of taking the medication could be de-motivating if proper adherence counseling is not done at the ART center by service providers. At the facility level, poor health worker attitude and waiting time could discourage adherence (Baligh et al, 2015).

The relationship between culture/customs cannot be under estimated when it comes to accessing health care in some societies (Wasti, et al., 2012).

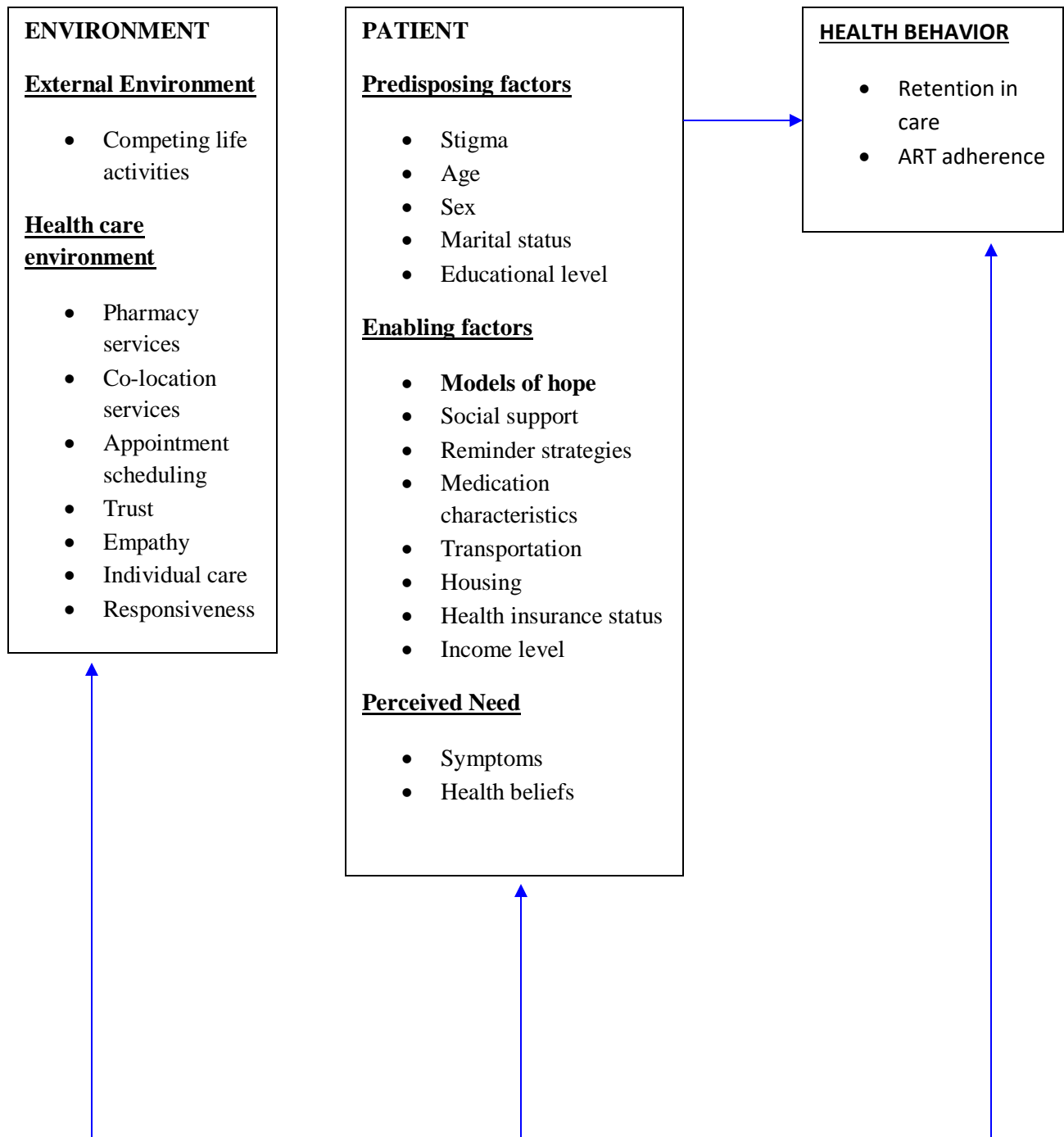


Figure 1 : The Anderson Model of Health Care Utilisation

## **2.8 Chapter Summary**

This chapter has examined literature on the key themes underpinning the study. Several factors, including socio-demographic characteristics and health service delivery factors have been identified as factors that can either facilitate or prevent adherence and retention to ART. From literature, adherence to ART is influenced by stigma from the society. Stigma either against men or women prevents them from taking drugs as scheduled especially in public. Effective information flow and cordial relationship between clients and their health professionals are important in facilitating adherence to ART and retention in care.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter presents the methods employed to achieve research objectives. Issues discussed in the chapter includes: research approach, research design, study area, population, sampling procedure, data collection instruments, data collection procedures methods, data processing and analysis. Institutional authorization was also discussed.

#### 3.2 Research Approach

This study employs qualitative methods to generate and analyze the views and responses from respondents [HIV patients]. Qualitative method is used in this study because it aid researchers to properly document, analyze and draw in-depth meaning and understanding from the views of the respondents. Another justification for using qualitative method is that, the researcher does not intend to generalize the finding to all patients but rather HIV positive patients assessing ART at the GARH. Again, analyzing the opinions of patients with quantitative figures is problematic; hence, qualitative approach was employed to understand the issues from exploratory perspective (Cox, 2010). Qualitative method is also flexible and allows follow up questions to probe cases further for deeper explanation and understanding. The choice of qualitative is also consistent with the view of Cresswell (2014), who argues that, qualitative approach uses strategies of inquiry such as narratives or case studies.

### **3.3 Research Design**

This research employs a case study design to explore the study objectives. A case study design is an “empirical inquiry that examines a contemporary phenomenon in depth and within its real life context, when the boundary between the phenomenon and the context are not defined” (Yin, 2009). The researcher wants to understand the phenomenon from the viewpoint of HIV positive patients who are assessing ART at the GARH. Case study design therefore allows the researcher to understand the environmental and patient factors that service as hindrances or support retention and adherence to ART. Case study design is most appropriate for researchers in search for rich understandings of a phenomenon in a given context and the processes being enacted (Morris & Wood, 1991).

Another reason for choosing case study design is that, according to Cresswell (2005) “is to enable the researcher explores program, an event, an activity, a process, or one or more individuals”. According to Saunders et al. (2009), this design is appropriate and mostly used in exploratory and explanatory studies because it help researchers answer research questions such as 'why', 'what' and 'how'. These questions better address the study objective of this study which seeks to understand how environmental and patient factors contribute to support or hinder adherence and retention to ART. Again, this strategy helps answer how retention and adherence to ART can be improved.

### **3.4 Population and Unit of Analysis**

In this research, the population of the study is all HIV positive individuals accessing ART at the GARH. The underlying reason for the choice of Greater Accra region of Ghana was based on the highest HIV prevalence amongst MSM (42.2%) compared to other regions like the Ashanti

(25.4%), Eastern (14%) and Central (10%) (GMS, 2017). The units of analysis for these respondents include

#### Inclusion criteria

A male or female living with HIV

Diagnosed at least 6 months ago

Must be above 18 years of age

Has attended the ART unit of the GARH for at least 6 months

Patients who will consent to the study

#### Exclusion criteria

Patients who are severely ill and cannot take part in the discussion.

### **3.5 Sample Size**

In this study, the researcher selected 12 patients for the study. From literature the number of individuals in a focus group discussion should range between 8 and 12 (Greg Guest et al., 2016). However, we were able to sample 6 persons for each focus group. This is because the study is quite sensitive and it was difficult to get clients, particularly men to consent to the study. Also only 12 out of the 20 people who had agreed to participate in the study actually showed up for the discussions.

### **3.6 Sampling technique and procedure**

Purposive sampling technique was used to sample respondents for the data. This is because the researcher was only interested in respondents who were diagnosed of HIV at least 6 months ago, above 18 years and attend the ART unit of GARH. Another reason for purposive sampling is that, the researcher was interested in getting respondents who possessed the required knowledge and information relating to the issue under investigation. The researcher first got clients retained in care and those not retained in care to form two focused groups. Each focused group had 6 participants, three which were retained in care and 3 not retained in care.

The key informant was purposively selected because she has over twenty years of experience in HIV care and we believed she could provide in depth information with regards to the study. A model of hope was also interviewed. A model of hope (MOH) is an HIV positive individual who is doing well on treatment and provides guidance and support to other HIV positive individuals on issues relating to adherence and retention in care. We interviewed the MOH because she is in regular contact with the clients and has developed a friendly relationship with them. We believed she will be able to render some information which we may not get from other health workers.

### **3.7 Data Collection Methods**

In this study, primary data was acquired using interviews. The interview guide was structured both in English and twi and then back to English for the purposes of study analysis. Interviews and discussions were conducted by experienced research assistants fluent in twi. In order to reduce bias and to get genuine responses from clients, all interviewers and moderators were people who do not work at the clinic. The interview guides centered on key themes of the research related to barriers and facilitators. The researcher had a guide for each focused group.

All interviews and discussions were audio recorded and short notes also written. Interviews took 45 minutes for both focus groups. The researcher met the respective participants and informed them of the study objectives and, explained the details of the study. Participants were also told the duration of the discussions.

### **3.8 Method of Data Analysis**

Thematic or content analysis was employed to analyze the data (Saldana, 2009). Braun and Clarke (2006) noted that thematic analysis describes “a method for identifying, analyzing, and reporting patterns (themes) within Data”. According to Saldana (2009), thematic analysis is mostly adopted for studies that are qualitative in nature.

The tape recordings were transcribed into Microsoft word and each respondent assigned a number. The transcribed interview result was then imported to QSR Nvivo 11 to aid in coding and analysis. Thematic data analysis was then used to qualitatively analyze the data to highlight the underlying pattern and processes that exist in the responses. This was done to explore and identify the leading themes and words from the interview responses that explain the view of the respondents. In the process of transcribing the interview result, the researcher established a connection between the stated questions, the result and drew relevant meaning from the result. The themes were reviewed and refined before the names of the final themes were determined.

### **3.9 Ethics**

Researcher’s confidentiality was assured that their responses are solely used for academic purposes. Respondents were given the option to opt out from engaging in the data collection process. Authorization was sought from the management of the GARH. The study was explained in clear terms to the participants and informed consent sought. Participants were not compelled

to partake in the study and they had a choice of not answering some of the questions, cessation of the interview or not entering the study at all. All information is being kept confidential.

Participants were informed of any potential discomforts whilst answering some of the questions.

Signed informed consent was sought from the participants before commencement of the study.

Participants were interviewed after consent form had been signed or thumb printed. Research

assistants were trained on appropriate data collection and data entry methods, to ensure

uniformity and accuracy. The principal researcher declared no conflict of interest with respect to

the study.

## CHAPTER FOUR

### FINDINGS

#### 4.1 Introduction

Descriptive statistics was used to analyze the demographic profile of 12 respondents while narrative analysis was used to analyze the qualitative data. “R” which is used in this chapter represents respondents. The profile of the responses respondents are presented in table 1.

Table 1: Profile of Respondents

Variable      Frequency      Percent (%)

<b>Variable</b>	<b>Frequency</b>	<b>Percent (%)</b>
<b>Sex</b>		
Male	0	0.0
Female	12	100
<b>Age (years)</b>		
31-40	7	58.33
41-50	3	25.00
Above 50	2	16.67
<b>Marital status</b>		
Single	5	41.67
Married	2	16.67
Widow	4	33.33
Divorced /separated	1	8.33

**Educational level**

None	5	41.67
Primary	4	33.33
JHS	2	16.67
SHS	1	8.33

**Religion**

Christian	9	75.00
Moslem	2	16.67
No religion	1	8.33

**Occupation**

Unemployed	8	66.67
Self-employed	4	33.33

**Source: Field Survey (2019)**

The table above shows the profile of the study participants. There were a total of 12 participants with none of them being male. This was because of, all the potential participants who were called, only two males agreed to partake in the study. These two men failed to show up on the day of the discussions.

83.3% of the respondents were aged above 50 years. About half of the participants had no formal education. Majority of them (75%) were Christian. The unemployed made up 66.67% of the total participants.

## **4.2 Facilitators of Adherence to ART and Retention in Care**

Adherence to antiretroviral therapy and continuous stay in HIV care are important processes in HIV patient management architecture. After a patient is initiated into ART, it is expected that the patient continue treatments, especially his or her refill drug. This important process does not only reduce related mortality and morbidity, but also prevent new and opportunistic infections. This study explored patients' personal factors and external health facility environmental factors that predict adherence and retention behavior. Based on Anderson Model of Health Utilization sub-themes such as; predisposing factors, enabling factors and perceived needs predict patients' adherence and retention behavior. External health facilities factors are were measured by sub-themes such as patients competing life activities, pharmacy services, trust, appointment scheduling and responsiveness. The study begins with patient personal factors that influence adherence to ART and retention in care.

### **4.2.1 Patient Personal Factors:**

According to Anderson Model of Healthcare Utilization, patient personal factors such as predisposing factors, enabling facilitators and perceived needs are drivers to adherence and retention to ART. The results revealed that, non-disclosure of status, model of hope, reminder, social and relationship factors, medicine characteristics, free medication, culture, religious and family support are important facilitators of adherence and retention to ART of Patients at Ridge Hospital in Greater Accra region of Ghana. Again, patients' perceived knowledge of improved condition also facilitates adherence and retention to ART. The level of education, sex, housing and income level were not found to be facilitators of adherence and retention to treatment. The personal facilitators have been explained below with responses from patients.

**a. Predisposing Factors:**

**Non-disclosure of status**

The first predisposing factor that facilitates adherence to ART and retention in care is non-disclosure of status. A respondent indicated that, fear of stigmatization invariable is a positive phenomenon for adherence to ART 8 respondent's demonstrated consensus indicating that patients who disclose their HIV status are often stigmatized, thus they refuse to disclose their status. Patients whose HIV is not known often feel free from stigmatization and are able to concentrate on treatment without feel of victimization. Clients therefore preferred to keep their HIV status to themselves so they can feel comfortable to take their medication

However, Respondents 3, 5 6 and 9 also said that, non-disclosure affect them because they are unable to receive the support they need. Significantly, patients preferred choice of non-disclosure of status disclosure facilitates their adherence and retention in treatment. "R" which is used in this chapter represents respondents.

A Respondent stated that;

*"[...], that is why for me I decided not to tell anyone, not even my husband until I started falling sick. My children even don't know because they are not staying with me. Only my pastor is aware. On my appointment day, I get in the morning and walk straight to take my drug. The people would have stigmatized me if they knew that I was HIV positive". (R1)*

Similarly, another respondent stated that

*“No one is aware that I am HIV positive so I walk freely to do my work and come to the hospital to refill my drugs. My husband is the only one who knows about this disease but he is dead. I am not stigmatized so I am free to sell my fruit and come to the hospital for my drugs”.* (R5)

A respondent also stated that:

*“[...], my husband died because people started stigmatizing him as HIV patient. He stopped going to the hospital for his drugs. I advised him but he did not take my advice. After his death I moved to a new place where no one knows my status. Now people don't stigmatize me so I get up and come to the doctor for my drugs. Now I take my drug in my house without stigmatization”.*

(R6)

The Model of Hope and the key informant shared similar view indicating that, most of the patients do not want to disclose their status for fear of stigma. They emphasized that, most people are stigmatized and thus they decide not to disclose their status. For instance, the MOH indicate that

*“Some patients prefer to be attended to even in their house. They prefer to stay in their house so that they can take their drugs. Some also want to go outside their area to attend hospital because they don't want the people in their area to stigmatized them. Some people even travel from Tema and they are ok with that because they are free to come to the hospital”*

### **Marital Status and Support**

Marital status of HIV patients was also found to be a factor encouraging patients to adhere to treatment. The study result revealed that, patients who adhere to treated were either married or widowed. 4 out of 12 respondents indicated that they are the ones who advised the men to seek treatment but they refused which eventually led to their death. This also shows that, women adhere to treatment more than men. From the responses, men always refuse continue treatment after their and therefore die earlier than the wives. A respondent stated that;

*“I told my husband that there is nothing we can do about this. The only solution we have is to go to the hospital. He started attending to treatment but he got angry one day and decided not to go the hospital again after the drugs finished. He later went back to the hospital when he started feeling sick. Unfortunately he died after some few years. I did my best to advise him as my husband but he defaulted almost all the time” (R3)*

Similarly, another respondent stated that;

*“I advised my husband to come to the hospital with me. My eldest child also has the disease. My husband started the treatment but he moved out of the house to some place and eventually died. My eldest son is alive and I have been encouraging him to take his drugs and come to hospital on appointment dates” (R9)*

Another respondent also stated;

*“My husband is very weak now so he cannot come and take the drugs. I try to bring him anytime he has to come and take his drug. My child doesn't have the disease but my husband is weak so I am the one who bring him to the hospital for treatment. Anytime he is fine, he doesn't even want to come unless I come with him to take his drugs. I am the strongest [laughs] so I help him a lot”.*

(R 11)

Another respondent stated that;

*“I was pregnant when I was told that I have the disease. My husband has been very helpful and encourages to me to come to hospital and always take my drugs so that I can protect the child. God was so good my child didn't get the disease. Unfortunately my husband is dead now but I still continue with my medication” R7*

## **b. Enabling Factors**

### **Reminder, social and relationship factors**

Respondent stated that, good family members, friends and religious leaders often provided financial and non-financial assistance to them. These social relations who include nurses at the hospitals even gave them money for transportation and their upkeep. The focus group discussions also indicated that they also receive non-financial support such as reminders of medication and encouragement. Religious leaders who are aware of patients' condition show concern and are trustworthy.

A respondent stated;

*“I have a nurse friend who assists me in diverse ways. I receive support from my family members and the nurse friend. When I am unable to take my medication at the hospital, my sister takes them on my behalf. The nurse friend also gives me encouragement to cope with the disease. Without the support from these people in my life I wouldn't be alive today” (R6)*

Another respondent also stated;

*“My mother always asks me whether it was time for me to go for medicine. She always asks whether I am taking my drugs and encourages me to take my drugs. She has been my helper who helps with money and food because I am not working. She helps me so much that she even brings me to the hospital any time I cannot come here myself” (R6)*

A respondent mentioned the role of the children. The respondent stated that;

*“My eldest son moved out when he heard of the disease so my eight year old child is the one assisting me to take my drugs. Sometimes I forget so it my child who remind me about my drugs and when it finished. My husband is dead so I rely on my child who helps” (R2)*

It also emerged from the study that, despite the associated with status disclosure, some respondents receive support and encouragement to adhere to treatment. This was revealed after

one respondent indicated that someone even offered to transport her to the hospital free of charge.

A respondent said that;

*“When the disease became so intense, my mother decided to bring me to the hospital. I was so weak that I couldn’t walk. A driver staying at our compound decided to bring us to the hospital”*

(R3)

Another respondent also stated that;

*“Periodically, my pastor calls me to find encourage me. He also finds out if I am taking my medicine or I visit the hospital. We are about five so the pastors show concern about. He encourages us to stick to the hospital treatment and also pray and hope in God”* (R4)

During the focus group discussion, respondent also indicated that, they receive support from health workers that they have developed friendship with.

A respondent narrated that;

*“The nurses often help us with money. When I come and I don’t have anything. I talk to the nurses who intend help me with money to take transport home and even buy food to eat”* (R1)

### **Medication characteristics**

Respondents indicated that they felt some varied degree of discomfort after taking drugs but that did not affect their next visit. Even though respondent experience side effects, respondents came back to treatment because they became fine after some time. Majority of the respondent who were mostly adherent to their medication indicated that they always came for refills despite the side effects, a respondent indicated that,

*“There was nausea, weakness and increased appetite. After sleeping I became fine so I saw that the medicine is good. Since then I always come for the drug because that is the only thing that will sustain me for now. Anytime it finishes, I come to the hospital to take some” (R1)*

Similarly, a respondent stated that

*“Initially I was very weak but after I became ok[fine], I started taking it again. The pain did not stop me from taking the drug. Sometimes I have to eat a lot because the drug increases my appetite for food. I manage to make sure I take the drug every day” (R12)*

### **Free medication and health insurance status**

Free ART drug provided at the ART clinic facilitate adherence to treatment. A further probe revealed that respondents received ARV drugs at the facility for free. Patients are always motivated to visit the hospital to refill without money as a barrier. As indicated by WHO (2009),

without effective drug supply system adherence to ART cannot be achieved. There was a consensus among the respondents that, the free medication at the facility encouraged them to take their drugs and come for refill at any time.

A respondent said that;

*“The drug is free so it is not a problem for me when I decide to come to the doctor [health facility] when I’m sick or have run out of medication”.* (R11)

Another respondent stated that;

*“The drug is free. I don’t pay anything when I come to the hospital. What I need is my transportation fare so I always come to the hospital for my drugs. I don’t care when I run out of medication because the hospital staff will refill it for me”* (R1)

A respondent stated;

*“[...], the drug is free so I always come for refill when it finishes”* (R12)

### **Occupation and housing**

The study shows that, self-employed HIV patients adhere to treatment. Patient who are self-employed are able to leave work to honor their appointment. Again, self-employed feel free to take their drugs at their work place without any notice and stigmatization. In effect, the high retention rates was due to the nature of their job which permits them to adhere to appointment schedule without fear of losing one’s job or being scorned for being late for work.

One respondent stated that;

*“[...] I sell fruits. I don't go to the market to sell when I have appointment. When I am weak I pack my fruit and go home to sleep. Sometimes I don't go to out to sell at all so that I can rest”*

(R9)

Similarly, another respondent stated that;

*“I am weak now so I am unable to do hard work. I get tired easily so I sit in the house until I have the strength. [...] When my drugs finish or it is time for my appointment, I just come for my drugs. I don't forget my drugs because I always place them beside me”* (R7)

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Another respondent stated that;

*“I sell just around the market so I walk in when on my appointment date is due. I just take my drug regularly because I have time to”* (R1)

### **Model of Hope**

Models of hope play significant role in ART adherence and retention strategy. Models of hope (MOH) as surviving patients of HIV are engaged in supportive roles where they give counseling and encouragement to patients before they are given their drugs. These people are constantly

stationed at the hospital to give talk to HIV patients who visit the hospital. From this findings of this study, the study result show that Models of hope give talk on various topic such as Adherence which informs patients why they should adhere to their drugs. For instance, the MOH indicated that;

*“[...] , on a normal morning, I [Model of Hope] give talk. [...] it depends on the topic we will choose. Sometimes we talk about adherence for the patients to know why they should adhere because you have taken the drugs and you are fine so if they continue to take it they will also be fine. We also talk about nutrition and condom use. [...], the topic is consistent; we talk about topic like adherence three to five times a week because sometimes you feel like you don't want to take the medicine again. So we talk about it almost every time”*

The researcher wanted to know whether their role facilitates adherence among patients who visit the hospital. The MOH stated that;

*“We build relationship with them. We tell them to call us any time they have problems. Sometimes you don't feel like taking the medicine again because at the end you will dies. Some patients even call us in the night and talk to us. So we encourage them and talk to them that it is the only thing that will keep them alive”*

The MOH also added that;

*“We also do home visit for those who want us to visit them. Some people do not want us to visit them because people will stigmatize them. For those who want us to visit them, sometimes they*

*even call us to ask when we are coming to visit them. They have our numbers. We sit town with them and have fun with them. Sometimes they don't want to come to the hospital because they don't want anyone to shout on them. When we visit them they are open to us and tell us their problems. When we go we also counsel them and also tell them that we have more to talk about when they come to the hospital at their next appointment date”.*

The researcher probed further to know how they get support for their programme as model of hope. This was to assess the effectiveness of their activities and the likelihood that it will facilitate adherence and retention. The model of hope stated that, their job is voluntary. However sometimes they are engaged by NGOs that have various projects in the area of HIV and receive some incentives from them.

*“This job is voluntary. Previously nurses were not interested in the ART Unit. We realised that, we were losing many patients. Now we have more than 200 Model of Hopes in Ghana and most of them are doing the job without any pay. If government can recognise our role and pay use something I think we can do much more to help improve adherence to ART”.*

### **c. Perceived Need**

#### **Culture and religious beliefs**

The study result showed that adherence to treatment is a priority for respondents' over religious and spiritual activities and traditional treatment. Respondent indicates that, religious leaders

rather motivate them to adhere to medication and also pray. The focus group discussions indicated participants did not rely on spiritual healing and traditional medicine as a cure for HIV.

A respondent stated that;

*“It is good to pray. I go to church but the medicine is important. My husband is dead because he didn’t take his medicine. Once you know your status, you have to take the drugs as scheduled and pray that God in his mercies will heal you. My church women’s leader even encourages me to pray and still take my drugs”.* (R1)

Another respondent stated that;

*“[...], as I said earlier, my pastor knows that I have the disease and he encourages me to pray. But at some days when he doesn’t see in church, he calls to find out if I am taking my drugs or I go the hospital to meet the doctor...”* (R2)

The responses of the HIV patient appear inconsistent with the responses from the Model of Hope and key Informants. The model of hope indicated that, some patients resort to religious and spiritual activities where they are given concoctions to drink. They only come to hospital after the disease has progressed. The key informant said that;

*“Sometimes when they come, they tell us that, they have used their monies to buy medicines. However, you later realize that they have given their monies to pastors and other religious leaders”*

### **Perceived improved condition**

The study result shows that, patient felt that their perceived improvement in their condition motivated them to adhere to treatment. Again, patients who witnessed their partner dying were motivated to adhere strictly their medication. The thought of dying as a result of defaulting compelled women to adhere to treatment. One respondent stated that;

*“[...], I think that, my condition is better than before. I have stayed for years after taking the medication. I know I will live longer when I continue taking the drug and meet doctor to assess me. My husband would have been alive if he had adhered to medication” (R4)*

Another respondent stated it this way;

*“I don't want to die because my husband defaulted and he died. I have to take my medicine and come to the hospital regularly. I am feeling better now”. (R6)*

A respondent stated;

*“Even if I don’t have money, I borrow to take car. The hospital is the only place that can help me survive so I have to take my drug. Even when I don’t have enough money for my next visit, I reduce my feeding money so that I can take transport to take my medicine” (R9)*

#### **4.2.2 Health Provider Environment**

Healthcare providers and characteristics of staff of the hospital were found to facilitate optimal adherence to treatment. The positive relationship between health staff and patients influences patients revisit the hospital to refill their drugs. Respondents also indicated that, they trust the hospital and the staff because there is privacy. Again, the location of the treatment center is far from the main facility which ensures privacy and encourages them to adhere to schedules. A respondent said that;

*“Since I came here, I have not heard that, my status has been disclosed to anyone. I trust that, they will always keep my information safe so that I feel safe to come here every time. The staffs are very caring and treat us very well” (R5)*

Another respondent stated;

*“[...], I didn’t feel safe in the previous hospital I was attending but when I came here I feel safe. The doctor attends to me individually. Even though the place is small but the doctor treats me very well” (R8)*

Again, the respondents indicated that, because there was a supportive non-judgmental care from health providers which sort to bring the clients need first, they always feel happy and encouraged to visit the health facility. This sort of treatment enabled respondents to accept treatment procedure and adhere to them. Respondents emphasized that their personal information was kept confidential which made them express their challenges freely for it to be addressed. This made respondents listen to every instruction given by health professionals and heeded to them. A respondent stated that;

*“We don’t have any problem with our health providers. Health workers attend to us very well. They keep our information privately and are good to us. We are able to tell them the challenges we face and they listen to us. The only problem is there are some few workers who do not treat us with respect they are usually new staff” (R11)*

Respondents agreed that, hospital staff regularly explains to them the changes in their conditions and how they should use their medication. Respondents also agreed that, sometimes, staff also encourage them to come to the health facility if they have any new condition. A respondent stated it this way;

*“The doctors [medical staff] are very good. When I came here first for my drugs they explained everything to me how I can take my drugs and the side effect after taking the drug. They also told me that I should report any changes that I see after taking the drugs. They are very good and I feel to come here even to relax myself” (R7)*

Another respondent stated that,

*“I have good relationship with them [medical staff] that they call me and my husband anytime our appointment time is approaching” (R9)*

The key informant stated that;

*“Some patients have psychological conditions and may not appreciate the need to take medication so the staff counsels them to adhering to medication as scheduled. Sometimes we ask them to come at a specific date and we talk to them before we give them the drug. We always encourage them to take their drugs and report any changes they experience.”*

#### **4.3 Barriers to HIV Patient’s Adherence to ART and Retention in Care**

The study result showed that, stigmatization, age and gender, transportation and economic challenges, drug refill schedules and attitudes of some officers and the pharmacy serve as barriers to adherence and retention to adherence to ART and retention in care. Other respondents also complained about drug refill schedules and preferential treatment, cost of feeding, cost of non ARVs and treatment requirements as barriers they faced. These patient personal and environmental barriers are explained below;

#### 4.2.1 Patient Personal Factors

##### a. Predisposing Factors:

##### Stigma

Patients are often stigmatized after disclosing their HIV status. This often makes patient dejected to come out to visit the hospital regularly. Patients are isolated immediately they show signs of HIV infection. Family members and relatives distance themselves from patients; thus, often refuse to lend their support because they believe there is no hope for them. In addition, for families of the affected patient not to be called names such curse, prostitutes among others, they do not adhere to their treatment regime to avoid any suspicion of their HIV status. A respondent stated that;

*“When I was told that I have the disease, I told my children and my husband. We didn't know who infected the other with the virus. Now, my eldest son doesn't even answer my calls again. Anytime I tell them that I want to go to the hospital they look at me some way. They also tell me that, they don't have money for me to take transport or take care of myself. Sometimes I have to borrow to pay for my transport and also buy food” (R1)*

Similarly, another respondent state that;

*“When you are sick and you are going to the hospital for your drugs, those who are aware of your status will be pointing figures at you. Sometimes I feel like, I shouldn't come out of my room but I have to work and go to the hospital for my drugs. Even my children don't want to come*

*close because I remember one told me that there is no hope in me. It very painful so I sometimes don't want to go when they are around” (R3)*

Respondents who decide not to disclose their status often lack support. If one does not disclose his or her status, it will be very difficult to get the support that you need. A respondent indicated that;

*“Initially I decided not to tell anyone because they may stigmatize me. But since I stopped working, it was very difficult for me to take care of my-self so. Sometimes it was very difficult for me buying food to eat or taking transport” (R5)*

The findings of the HIV patient is consistent with the view of the Model of Hope and key informant indicating that, stigma is really a big problem for adherence. The model of hope indicated that

*“We have people coming all the way from WA because of stigma. They don't want people at their area to see them else they will stigmatize them. In order for them to prove to the community that is not sick they will stay at home”*

### **Age and Gender**

The focus group discussion revealed that young people, usually men are non-adherent to ART treatment. Women regardless of their age were more adherent to ART than men. Health records

indicated that women had a high turn up rate for treatment than men. From the records available at the health facility, the regular attendance is women beyond age of 31 years. Young people always don't come back after their first visit or diagnosis. A respondent stated that;

*“Young men find it very difficult accepting this situation of being HIV positive. Some will come and tell you they don't believe it. If you go through the books you will realize women adhere much more than men. Men don't want to come because of stigma especially young guys. For women because at the time they come they are pregnant and may want to protect the babies they adhere to treatment.” (R8)*

*“We interact with all them, women are much more adherent than men and they account for 98% of adherence level while men account for 90%. Men like to take risk so they wait for last minutes before seeking treatment”*

The MOH added that;

*“Young people usually men were associated with non-adherence to ART. Some of them, you don't even hear anything about them again, after their first visit to the center”*

**b. Enabling Factors**

**Transportation and Economic Barriers**

Those who expressed some challenges during the focus group discussion attributed default to the lack of financial support, high transportation and living cost of living and family neglect.

For fear of stigma, some respondents travelled long distances to seek care at the facility. HIV services are structured in a way that one must stick to one facility for treatment to enhance monitoring. This makes it difficult for respondents from far places to replenish their drugs at ease because of transportation cost. There was consensus among the respondents that, they live far from the hospital and therefore they have to ride in taxis and trotros to get to the hospital. This was a major challenge for them in terms of transportation cost.

One respondent stated:

*“I stay far from here. It takes about one to two hours before I get to the hospital depending on the type of transportation. I have to take taxi to bring me here. I am fortunate to have parents who support me when I want to come to for medicine” (R9)*

Another respondent stated that;

*“If I don't get trotro that will bring me to the station here, I have to take taxi at two locations before I get here. It takes me about 1 hour to get to the location. This is money and I am not working. People help me and I also get some money from my children. But sometimes it is very difficult coming to refill my drugs” (R9)*

Another respondent stated that

*“It’s very expensive to board a car to come to clinic. Sometimes I don’t come because I have no money”.* (R9)

The MOH also added that;

*“How can a person come from say Adenta to Ridge Hospital for free drug and pay for ghc 20 transport. Sometimes if they don’t have money them they will not come. Sometimes, we encourage to take medication from an ART centre close to them because there are fewer clients there. Everyone wants to come here because they will be stigmatized if they went to a centre in their area”*

### **Medication Characteristics**

Respondents also indicated that, taking the drug makes them eat a lot so they must get enough food when they want to take the drug. During periods that they don’t have food, they normally default or skip taking the drug until they get enough food. They complain that, the hospital has stopped the food assistance that they give to them which makes it difficult for them to adhere to their drug schedule. A respondent said that;

*“The drugs make me to eat so if I don’t have money to buy food, I have to wait until I get money to buy food. The hospital used to give me [tombrown] but they have stopped. Sometimes, there is*

*nothing for me to eat so I have to skip the drug or default appointment or wait until someone help me with money” (R10)*

Another respondent stated that;

*“I use all my monies for transportation so when I come home I don’t get anything to buy food. The drug requires that you eat a lot but when I don’t have money to buy the food I don’t want to take. But I take it when I have food to eat.” (R11)*

## **Symptoms and health beliefs**

### **Health Beliefs**

Patients who felt they were healthy did not understand why they had to visit the doctor regularly. They felt they should be given the opportunity of seeing the doctor only when they felt sick rather than coming for regular reviews. Apart from laboratory test and consultations, they were obliged to visit the hospital at regular scheduled times for their medication. Such appointments keep them away from their activities making it difficult for them to honour their appointments. A respondent stated that

*“My mother died and I had to go the village for the funeral, I forgot my drug so I defaulted. It wasn’t intentional but there was nothing I could do than default” (R12)*

The MOH also indicated that, some patients resort to pastors and traditional healers where they patients pay as much as GHC 2000 with the hope of getting healed. This is what the MOH stated;

“Sometimes, they come and tell you that, doctor, test me again and see. So we will probe and realise that, they have taken some concoctions and they want the doctor to test to see if they still have the infection.”

#### **4.3.2 Health Provider Environment Factor**

##### **Pharmacy services**

Delay in services delivery especially at the pharmacy was a challenge for most respondents. This delay was associated with preferential treatments given to people who knew health workers. This was a major concern since some respondents had to leave their business which helped them to make ends meet. A respondent R6, who was a house help got sacked after frequent seeking permission to visit the hospital. A respondent narrated her story.

*“The madam asked me to stop the work if I have no time to do the work. Initially I missed my appointment and even forget to take my drugs because the work load was too much. I eventually stopped because I was missing my appointments date. I was also feeling very weak every day. Since I stopped, I also find it very difficult to raise money to support myself so it very challenging for me” (R6)*

Those who had not been able to disclose their status to their employees for fear of stigma found it difficult to ask permission all the time. A respondent stated that;

*“My mother[superior] doesn’t know that I have the disease so sometimes I don’t want to ask permission frequently that I am going to the hospital to take medication. Sometimes I have to miss my date because that is the only source of my income” (R10)*

## CHAPTER FIVE

### DISCUSSION OF FINDINGS

#### 5.1 Adherence to ART

Antiretroviral therapy (ART) is effective preventing progression of HIV. It suppresses the HIV in the blood stream which allows the human immune system to prevent other opportunistic infections and allows the human system to function properly. This study explored the facilitator and the barriers to adherence to ART and retention in care of HIV patients in Greater Accra region. The presentation of the study was done based on the Anderson Model of Health Care Utilisation. Two major themes namely Patient Personal factors and External Health provider environment were discussed. Other sub-themes that emerged from the study have also been discussed.

##### **5.1.1 Facilitators to ART Adherence and Retention in Care**

The study result showed that, some patient personal factors influence adherence to ART and retention in care. The study found that, non-disclosure of status, model of hope, reminder, social and relationship factors, medicine characteristics, free medication, culture, religious and family support facilitate ART adherence and retention for HIV patients in the region.

##### **Predisposing Facilitators**

On predisposing facilitating factors, the study result revealed that, patient prefer to keep their status confidential so that they will avoid stigmatization. Patients whose HIV is not known often feel free from stigmatization and are able to concentrate on treatment without feel of

victimization. The study result also shows that, married women often advise their husband to visit the hospital for treatment. Patient who are married also receive support from their spouse. Married patients are compelled to adhere to ART because they saw their husband after default while they experience improvement after taking medication.

The study result also shows that, older women adhere to ART than men. This is because young men were regarded as less likely to accept long term therapies. Again, men find it very difficult to accept their situation and prefer to wait and see the end. This was based on the fact that most men who were contacted for the study declined to participate. The few men who agreed to participate did not show up for the study. Also, based on their existing health records where more women were recorded to be adherent than men. The study result also showed that, married people are more motivated adhere because they feel scared and want to see their situation improve.

These participants regarded ART as important because they had achieved benefit through the efficacy of treatment even though it had initial problems. Consistently some studies identified that achievement or benefit derived from medication influence adherence to ART and retention in care (Holstad, et al., 2006; Luszczynska, Sarkar & Knoll, 2007). The Anderson Model of Health care utilization state that, patient predisposition factors such as stigma, age, sex, marital status may facilitate adherence to ART and retention in care. Again, the health belief model, physiological features like age and gender as well as perceived benefits had an impact on the behavior of participants to adhere to ART and remain in care. Consistent with the two models the study confirms that, non-disclosure of status, marital support facilitate adherence and retention to ART. Age and gender also determines the extent of adherence and retention. Education did not have facilitating effect on adherence to ART and retention in care in the study. Indicating that an

individual willingness to adhere to medication depends on the decision not to disclose his status, age, and gender perceives benefits.

### **Enabling and Perceived Need Factors**

The study showed enabling factors such as reminder, social and family support, free medication and health insurance, occupation and housing, medication characteristics and model of hope facilitate adherence to ART treatment. The study provided an insight that disclosing status to religious leaders, family and relatives without stigma facilitates adherence to ART and retention in care. Stigmatization impedes adherences while encouragement facilitate adherence. Patients who receive both financial and non-financial support from family and relatives adhere to treatment.

Again, the cordial relationship and support from health professional's adherence to ART and retention in care. For instance, as part of treatment procedures, respondents are given regular talk by health professionals. They also receive counseling which encourages them to adhere to the treatment. Some health professional have positive and cordial relations with patients who even call them and give them transportation far. The study also showed that, support from family members and social leaders such as pastor is facilitating adherence. Curiously, the study noticed that, there is a change where pastors are now encouraging HIV patient to visit hospital while they pray. This study therefore confirms other studies that attest that good social support aids adherence to ART (Afolabi et al., 2013; Fredriksen-Goldsen, et al., 2011; Nachegba et al., 2006).

The study result also notices that, some patients who disclose their status to people like husband, mothers, religious leaders and health officers often receive support. Health professionals and religious leaders and organizations pass confidants (treatment supporters) through series of counseling. This could be the reason why there is justified reason for both disclosure and non-disclose.

However, the lesson is that, patient are careful about who they disclose their status to. Studies have established that existence of stigma prevented people living with HIV to adhere to treatment (Curioso et al., 2010; Kagee, et al., 2011). An example is taking the medication in public or walking very weak where everyone suspect that you are HIV patient. When a situation like this happens, patients prefer to miss appointment and or medication for fear of being identified. Although there was less stigma, some respondents don't disclose their status and these patient are very careful with whom they disclose their identity to.

The study result also showed a paradigm shift among HIV patients regarding religious, culture, spirituality and the HIV disease. Patients see adherence and retention to treatment as most important and the only source of life for them. Therefore, patient admonished that they will rather visit the hospital than resorting to prayers, religious activities and herbal medication. Patients prefer to honour hospital appointments than going for church activities. Unexpectedly, patient indicated that, their religious leaders and religious counselors are now encouraging them to take medical treatment seriously alongside prayers. Again, religious leaders create opportunities for patient to receive support trustworthy individuals. Thus, their adherence to treatment has been partly influenced by the counseling services they receive, which convinced them HIV had no cure and adhering to medication was the only way to live long in good health. This finding is inconsistent with previous studies which found that, culture and religion are

barriers to ART adherence (Olowookere et al., 2008; Wanyama, et al., 2007; Walker et al., 2004). Although respondents attested they did not rely on spirituality, the Model of Hope and the key informant indicate that, some patient defaulted treatment because of what some religious people tell them. Some pay huge sums of money to pastors and other religious activities.

### **Hospital Environmental Factors**

The role of health professional and service delivery environment also play significant role in facilitating adhere and retention to treatment. The study result found that, positive relationship between patient and clients encourage patients to report to the hospital for refill. While some respondents indicate receiving support from health staff, others also indicated that, the model of hope and encouragements they receive from staff of the hospital encourage them to adhere to their treatment. This confirms previous studies which found evidence that, positive relationship between health providers and patient include clients decision to continue treatment (Beach, Keruly, & Moore, 2006; Murphy et al., 2000).

From the study, supportive non-judgmental care, privacy and perception of patients about their hospital staff also convince them to always come to the hospital. This sort of treatment enabled respondents to accept treatment procedure and adhere to them. Respondent indicated that, their information was kept confidential which made them express their challenges freely for it to be addressed. This made respondents listen to every instruction given by health professionals and heeded to them confirming that trust, privacy and confidentiality with health professionals is associated with adherence to ART and retention in care (Golin, Lui & Hays, 2002; Posse & Baltussen, 2009).

Regular supply of the drug and easy access to the drug encourages them to come to the ART centre. It doesn't take long for them to receive their drugs even though the process may be a bit long. A further probe revealed that respondents received drugs at the facility for free which motivated them to adhere to refill schedules. The supply system also ensured that each respondent received drugs when he or she came for refill to ensure continuity of treatment. As indicated by WHO (2009), "without effective drug supply system adherence to ART cannot be achieved".

Other factors that facilitated patient adherence to treatment was health education, counseling and monitoring activities on the part of health workers. These activities were done by some hospital staff and respondents expressed their joy about such initiatives at the facility. Respondents received regular counseling which encourages them and inform their behavior towards attendance to treatment. As suggested by the information motivation model, the counseling services informed respondents on the need to adhere to medication and even continue the treatment. This same counseling enabled them obtain support from those they disclosed their status. Health promotion activities facilitated adherence to ART by informing respondents on how HIV is treated and how to live a normal life in good health.

### **5.1.2 Barriers to ART Adherence**

The study result also showed that, patients face some challenges which affected their adherence and retention in care. Most of the barriers they faced were financial and economic related while less significantly, the number of appointments they had to fulfil for refill. Respondents prefer to have large volume of the drugs so that they could prolong the regular appointment schedule. Patients who felt they were healthy did not understand why they had to visit the doctor regularly.

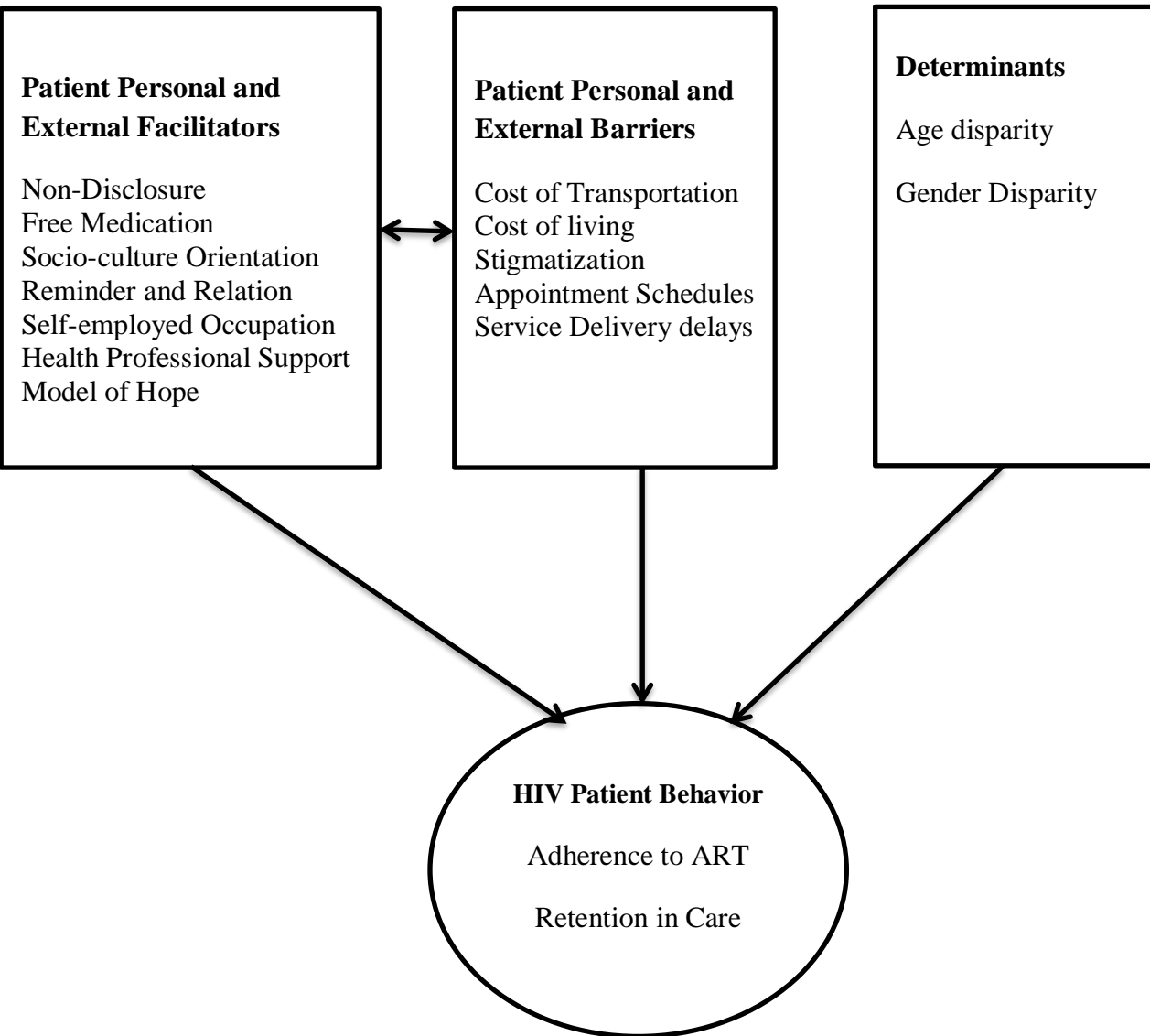
They felt they should be given the opportunity of seeing the doctor only when they felt sick or are coming for refill rather than coming for regular reviews.

For fear of stigma, some respondents travel from far places to seek care at the facilities studied. HIV services are structured in a way that one must remain with one facility for treatment to enhance monitoring and proper treatment. This makes it difficult for respondents from far places to replenish their drugs at ease because of transportation cost associated with the long distance. Also, Not different, transportation cost for drug refill was also identified as barriers in studies by (Hardon, Akurut & Comoro, 2007; Kangee & Delpont, 2010). Sometimes, patients have to skip appointment when they don't have money.

Respondent also indicated that, the drug they take makes them eat a lot and since they do have enough money to support themselves, they sometimes skip treatments until they have money. Sometimes, patients have to reduce their food intake to be able to save and attend to appointment. At critical times where they don't get any support from relatives and social relations, they don't come to the hospital for treatment. This was a significant barrier adherence and retention among the respondent studies. Respondents therefore recommended a reintroduction of the food support system which once helped ease their burden.

Delay in services delivery was a challenge for most respondents. This delay was associated to large numbers of patient who visit the facility and also some of the staff is not prompt and preferential treatments given to people who knew health workers. This was a major concern since some respondents had to leave their small petty trade and come for treatment. This is consistent with a study in Botswana, which showed that staying away from work for clinic was a challenge to ART adherence and retention (Hardon et al., 2007).

Figure 2: Post Study Framework of Adherence to ART and Retention in Care



Adherence to antiretroviral therapy and retention in care from the study can be described as the ability of HIV positive patient to consistently follow and comply with medication schedule, dosage, and revisit appointment as prescribed by the qualified health professional. From the study, the main factor that influenced adherence to ART was non-disclosure of status, age and gender of patient, marital status and occupation, reminder and social relations, medical characteristics, free medication, culture and religion and health professional. The desire of HIV positive patients not to disclose his/her status helps concentration and improve adherence to treatment without fear of stigmatization. Again, existence of support from religious leaders, health staff, and some family relations encourage patients to adhere and continue treatment. Lastly, the free and subsidized drugs, effective health education, counseling, monitoring and improved health condition encourage adherence and retention. Cordial relationship between respondents and service providers allowed patient to express their challenges, thus improving adherence to treatment. While health staff calls patients who miss some appointment dates, others give monies to patients as transport to encourage revisit.

Models of Hope provide counseling and encouragement for patients. They do home visit to encourage patients to adhere and visit the hospital. Models of hope provide telephone numbers to patients to call anytime they have a problem. These factors facilitated adherence to ART.

Though, patients sometimes felt reluctant to come for treatments, they were motivated by their improved health outcomes to continue therapy. The models of hope recommended that, there is the need for a policy where pregnant women should come with their partners on their first antenatal visit to the hospital. This is to ensure that partners are also counseled to support and encourage them to fulfill hospital visits and also adhere to treatment. However, the recommendation was inconsistent with the view of the Key informants who advocated that,

health professionals should be helped to improve on their knowledge in order to improve adherence to ART.

Nonetheless, barriers like stigmatization, high transportation cost, cancellation of feeding support, appointment schedules, and delay in service delivery prevent respondents from adhering and continuing their treatment. Model of Hope and Key informant shares similar opinions that, patients come from far places for fear of being stigmatized. Patients travel from other regions to the capital to access care and this brings a lot of pressure in terms of transportation. Both the key informants and Model of hope emphasized that, stigmatization and financial challenges are major barriers to adherence.

## CHAPTER SIX

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 6.1 Summary of Key Findings

Human Immune Deficiency Virus is one of the diseases for which no cure has been found yet. Fortunately, clinical research has led to the discovery of antiretroviral therapy (ART) which can be used to prolong the lives of persons living the virus. Though there has been improvement HIV management in Ghana, default rate is high and gaining prominence in most hospitals. Literature and policy have noted that, adherence to ART and retention depend largely patient personal factors as well as service providers' environment.

From patient personal factors, the study notes that, such non-disclosure of status, medical characteristics, free medication, socio-culture and religious support and MOHs facilitate ART adherence and retention in care. Marital status and self-employed occupation of patients also facilitate adherence and retention in care. Again, reminder and social relations also help facilitate adherence to treatment. Again, there is high rate of adherence and retention among older women than men and young people. Patients were encouraged to adhere to ART because their husband died after they refused to attend to treatment. Older women are patient who adhere to ART, this is because young men were regarded as less likely to accept long term therapies. Again, men find it very difficult to accept their situation and prefer to wait and see the end.

While some patients indicate receiving support from health staff, others also indicated that, the encouragement and education from MOH improve adherence. Regular talk on adherence given by health professionals improves retention in care and ART adherence. Some health professional have positive and cordial relations with patient who even call them and give them transportation.

Most of the barriers to adherence and retention to treatment were financial and economic related while less significantly, the number of appointments time they have to come for treatment prevented them from adhering to them. Individuals who felt they were healthy did not understand why they had to visit the doctor regularly. For fear of stigma, some respondents traveled from far places to seek care at the facility. This makes it difficult for respondents from far places to replenish their drugs at ease because of transportation cost. The drug requires that, patient eat well and since they do not have enough money to support themselves, they sometimes skip treatment until they have money. Delay in service delivery especially at the pharmacy was a challenge for most respondents. In effect, financial and economic related challenges are the major barriers to adherence and retention in care of HIV patients.

## **6.2 Major Conclusions**

Based on the finding from the analysis, the following conclusions are drawn.

Patient personal factors and service provider environment are important facilitators of patient adherence to ART and retention in care. Patients living with HIV were committed to improve their health condition and stay longer. Patients were prepared to comply with treatment requirements notwithstanding the challenges they face. Especially, older people are more concerned and adherent to treatment than men and younger HIV patients.

Specifically, non-disclosure of status is a significant patient factor which facilitate adherence to ART and retention in care. Non-disclosure relieves patients from stigma and ensures that they have the freedom to attend hospital and take drugs without stigmatization. Again, free drugs supply for HIV patients is also a significant facilitator of adherence to treatment. Existence of socio-cultural support from health professionals, family members and religious groups and organisation encourages adherence and retention to ART treatment. Support services such as counseling from health officers and religious groups assisting patients to cope with the condition, assisting patients to take refills among others, aided adherence to retention to ART treatment. Again, perceived improvement in condition and experience of death of partners served as major boost for patients. In effect, both predisposing factors, enabling factors and perceived need facilitate adherence and retention in care for HIV patients

Model of Hope are important facilitators of retention to ART. MOH offer counseling, education and hope to HIV positive individuals. It has therefore become important for government to recognize the role of MOH as providing essential services. MOH can be given labor status so that they can be employed under the Ghana Health Service they to offer these essential services.

Barriers to adherence and retention to ART are significantly dependent on patient personal factor as well as environmental factors. Transportation and feeding cost are the major challenges constraining adherence to ART and retention in care. For fear of stigma, patients travel from far places to seek medical care which put financial burden on them. Stigmatization is a significant barrier to adherence and retention in care for HIV patients.

### **6.3 Recommendations**

The following recommendations have been made for policy considerations.

Concerns were raised that travelling for drugs and returning after weeks for refill is them in terms of resources to commute and even feed themselves. The regular monthly refill attendance increases transport cost; a barrier to ART adherence and retention. With effective systems, ARV can be dispensed to patients for a longer duration thus reducing transport cost. Health managers and policy-makers may need to review ART refill processes periodically to infuse more dynamism and effectiveness. Greater effort can be made to ensure that clients receive drugs under more convenient arrangements.

Again, it is recommended that, reintroducing the food aid where patient were assisted with food to help relieve them of their feeding cost should be considered. Management could arrange with NGOs and other HIV and AIDS support organisations to help reintroduce this programme since it encourages adherence to ART and retention.

Also, delay in service delivery could be associated with fewer health professionals attending to numerous patients. The study revealed that health workers were over-stretched during clinic days, resulting in stressful working conditions. Stress associated with work can impede quality healthcare delivery. It is therefore suggested that more personnel can be trained on HIV and AIDS to help reduce the workload (this was strongly suggested by health professionals).

In addition, management could organize special events to motivate staff. This will enable them continue their good work on improving the lives of people living with HIV. It may be worthwhile to consider subsidizing Non-ARV drugs especially for clients who cannot do without. This will heighten their commitment to adhering to antiretroviral therapy.

Governments should ensure that health professionals are supported to undertake training and development programmes in order to improve their knowledge on adherence. Again, the study recommends that, government should spread focus to include youths who are fast recording high rates of new infection.

#### **6.4 Limitation and Future Research Direction**

The study is limited in design, sample size and measurements of adherence and retention.

Adherence to ART is best assessed in a longer timeframe. “Individuals involved need some follow up visits for a period of three to six months to confirm if adherence is indeed high.

However, the study used seven days to assess adherence to ART. Again, the sample size is not enough to generalize adherence and retention in ART care”. Again, organizing and arranging for participants at the selected facility was very difficult due to confidentiality issues. Men did not take part in the study which limited the study to only women. Another limitation to the study included self-reported methods for data collection on antiretroviral adherence with its associated factors.

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