

**ASSESSMENT OF STATUS DISCLOSURE AND MEDICATION COMPLIANCE  
AMONG PEOPLE LIVING WITH HIV/AIDS (PLWHA) WITHIN THE  
NSAWAM-ADOAGYIRI MUNICIPALITY**

**BY**

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**STATEMENT OF AUTHENCITY**

I hereby declare that this submission is my own work and to the best of my knowledge, contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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## DEDICATION

To God Almighty, who authored and designed my existence and purpose.

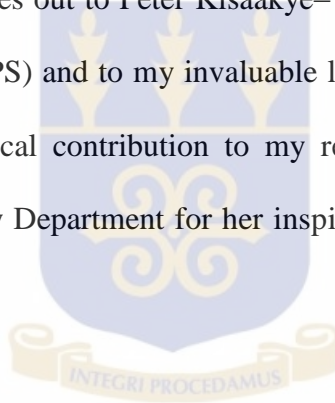
To my parents, for the innumerable deposits you have made in my life and for being my role models. God munificently bless you



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**ABSTRACT:**

This study assessed the determinants of HIV status disclosure and compliance to antiretroviral therapy (ART) medication. The main objective was to explore whether background characteristics affect disclosure of HIV status and compliance to medication, and whether status disclosure affects compliance to medication. The Health Belief Model provided the framework from which various linkages between the two variables being studied and conceptual issues were examined. The study was conducted among 83 Persons Living with HIV/AIDS (PLWHA) who were on ART medication at the Nsawam Government Hospital within the Nsawam- Adoagyiri Municipality. Respondents in the study were 58 PLWHA who had disclosed their status and 25 PLWHA who had not disclosed their status. Respondents completed a questionnaire regarding status disclosure and compliance to medication. In general, respondents who had disclosed their HIV status had optimal compliance to medication more than those who had not disclosed their status. The relationship between status disclosure and compliance was found to be statistically significant at a 0.05 significant level. Apart from respondents' gender which was found to have a significant relationship with compliance to medication, other socio-demographic variables were found not to have a significant relationship with either status disclosure or compliance. Respondents' opinion on the importance of disclosing their HIV status and barriers preventing status disclosure were also assessed and the findings discussed with relevant literature. In summary, recommendations to improve medication compliance among PLWHA were provided: To begin with, an all- out campaign by government and stakeholders to join efforts to sensitize people on HIV/AIDS and

advocate the concerns of PLWHA was proposed. Secondly, it was proposed that communication strategies of health workers must be improved to assist PLWHA struggling with compliance to ART medication. Additionally, NGO's and all stakeholders were admonished to strengthen structures and platforms for promoting the welfare of PLWHA. Lastly, it was recommended that stricter enforcement of legal provisions regarding infractions committed against PLWHA must be upheld by administrative and government policies. The recommendations were made with the need for encouraging status disclosure emphasized as it enhances compliance to medication.

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**LIST OF ACRONYMS**

<b>AIDS</b>	Acquired Immune Deficiency
<b>ART</b>	Antiretroviral therapy
<b>ARV</b>	Antiretroviral
<b>GAC</b>	Ghana AIDS Commission
<b>GHS</b>	Ghana Health Service
<b>HAART</b>	Highly active antiretroviral therapy
<b>HIV</b>	Human Immuno-Deficiency Virus
<b>HBM</b>	Health Belief Model
<b>ISSER</b>	Institute of Statistical, Social and Economic Research
<b>MOH</b>	Ministry of Health
<b>NACP</b>	National AIDS Control Programme
<b>NGO</b>	Non-Governmental Organisation
<b>PLWHA</b>	Person(s) Living with HIV/AIDS
<b>UNAIDS</b>	Joint United Nations Programme on HIV/AIDS
<b>USAID</b>	United States Agency for International Development
<b>WHO</b>	World Health Organisation

## CHAPTER ONE

### BACKGROUND TO THE STUDY

#### 1.0 Introduction

Compliance to antiretroviral therapy (ART) medication is critical in the effective treatment and survival of People Living with HIV/AIDS (PLWHA). According to the NACP- HIV Health Care Manual 2012, HIV/AIDS status disclosure is a necessary factor and condition in promoting optimal compliance to anti-retroviral medication (ART). Some benefits of status disclosure include PLWHA receiving the needed support and encouragement in their drug use. This study therefore attempts to assess the determinants of status disclosure and compliance to ART medication.

Acquired Immune Deficiency Syndrome (AIDS) is one of the most destructive epidemics the world has ever witnessed. Globally, an estimated 35.3 (32.2–38.8) million people were living with HIV in 2012. According to estimates by WHO and UNAIDS, 35 million people were living with HIV globally at the end of 2013. That same year, some 2.1 million people became newly infected, and 1.5 million died of AIDS-related causes. (Global Report,-UNAIDS and WHO, 2013).

However, there has been a decline in the number of new infections in Sub-Saharan Africa. In West and Central Africa, Ghana was at the top of the list with a drop of 66 percent followed by Burkina Faso at 60 percent and Djibouti at 58 percent representing countries that have achieved some decline in new HIV infections (UNAIDS, 2012).

Results for the epidemiological and demographic projections of the HIV/AIDS epidemic showed that, the number of PLWHA in Ghana has fallen steadily since the start of the epidemic in the mid- 1980s.

According to the 2012 National HIV Prevalence and Estimate Report, the estimated national HIV prevalence in 2012 was 1.37 percent. The report shows a reduction in adult national HIV prevalence in 2012 compared to 2011's 1.5 percent in Ghana (NACP, 2013). Subsequently, in 2011 there were 225,478 adults and children living with HIV (30,401 children) and there were 12,077 new infections. These successes can be largely traced to the advent of highly active antiretroviral therapy (HAART) in the management of PLWHA in Ghana (NACP, 2011).

With the introduction of ART medication in developed countries, there has been an improvement in the quality of life and subsequent reduction in mortality of PLWHA. However, ART medication demands effective compliance by PLWHA to work properly. In a study by Nachenga *et al* (2010) it was found that ART regimen requires between 70 percent to 90 percent compliance to be effective, meaning strict compliance cannot be overemphasized or compromised. In Ghana, ART medication has played a role in prolonging the lives of infected persons. (NACP, 2011) The therapy acts by controlling the viral replication within PLWHA thereby providing them stronger immunity against the disease.

Since May 2003, when ART medication was introduced in Ghana, a cumulative total of 65,342 people have been initiated on the therapy. Out of this number, approximately 3,500 have died and almost 2,400 have been lost to follow up. Some PLWHA who were once declared lost to follow up were found to have returned to restart treatment. Also, another 443 stopped treatment due to adverse clinical event. Thus, 59,000 people representing 90 percent are alive and still receiving ART medication (NACP, 2011).

One of the key factors in fostering and maintaining ART medication compliance is status disclosure. The disclosure of HIV infection status is a critical step and has implications for compliance. The social perception of HIV/AIDS in Ghana is typically shrouded in ignorance, superstition and misconception making it difficult for infected persons to disclose their HIV status to significant others in their lives. In spite of potential benefits such as social support and prevention of new infections, HIV status disclosure which should be a precondition for obtaining functional social support for ART medication compliance, appears to rather induce negative reactions in a number of reported instances (GAC, 2012).

For example, in an interaction with health workers at the Korle-Bu Teaching Hospital and the Nsawam Government Hospital, the researcher was informed about persistent reported instances of abuse and victimization of PLWHA. Most of the reported cases cited were the results of PLWHA disclosing their HIV status to significant others in their lives.

The net effect of such a state of affairs is has been the incidence of most infected persons choosing to remain silent about their HIV/AIDS status. This may result in poor or non-compliance with the ART regimen leading to drug failure and the incidence of new infections further stretching the prevalence of HIV/AIDS. PLWHA currently taking ART medication in Ghana face various challenges that may affect the daily taking of their medicine. Disclosure of HIV status to others is one of the factors that may affect compliance to ART medication (GAC, 2012).

Disclosure of HIV status for the purpose of this study is letting a trusted person(s) who is/ are willing to assist in PLWHA's clinical treatment know about the individual's HIV status (Rabkin *et al.*, 2005). Presently, major stakeholders in HIV/AIDS healthcare management in Ghana such as the National AIDS Control Programme advocate support for HIV/AIDS status disclosure and train health workers on the need to encourage PLHWA to disclose their status in their care and treatment process (NACP, 2010).

Disclosure of HIV status has often been regarded as an indicator of an individual's readiness and ability to accept and live with the individual's condition. A PLWHA perception of a positive HIV status dictates how that they will respond to the information that they are HIV positive. Often, unfavourable perceptions can lead a PLWHA to exclude him/herself from society and shun the company of others. Since they themselves have not accepted and disclosed their HIV status, individuals will always feel uneasy amongst people as they will suspect that people are talking about them, looking and analyzing or diagnosing their symptoms (Lévy *et al.*, 1999; Paxton., 2002).

These negative feelings go a long way to affect treatment compliance if not managed when the PLWHA status is first disclosed to him/her. Some studies have explored the effects that disclosure of HIV status can have on compliance to ART medication. For example, Klitzman *et al.*, (2004) conducted a study in the United States to explore effects that came about as a result of HIV status disclosure or non-disclosure amongst PLWHA. It was reported that HIV disclosure might have been a key variable in obtaining or mediating social support and that social support could have been important for compliance to ART medication.

Compliance is the ability of a PLWHA to consistently follow his or her medication schedule and take their medications as exactly as directed. The medication schedule set up by a healthcare provider is designed to keep the right levels of medication in the bloodstream of a person with HIV. Studies have shown that strictly following an HIV medication schedule can increase survival. Not following this schedule or the instructions set by a healthcare provider can result in serious problems, including viral resistance and ultimately drug failure (Tarn *et al.*, 2006). ART medication compliance is thus so critical in the HIV/AIDS treatment process.

### **1.1 Problem Statement**

Antiretroviral medication has become one of the foremost approaches in managing the spread of the virus. Despite the strides made in scaling up the clinical service for PLWHA including ART medication, there are challenges that militate against full drug

coverage and PLWHA compliance to the ART medication. This adversely affects efforts to combat the epidemic (NACP, 2011).

Results from the 2012 HIV Sentinel Surveillance (HSS) of Ghana report has shown a reduction in national adult HIV-prevalence as well as a reduction in new HIV infections. According to the report, Ghana has experienced a reduction in national adult HIV-prevalence from a high of 3.6% in 2003 to 1.37% in 2012 (GAC, 2013).

PLWHA must maintain optimal compliance to ART medication in order to maximize the benefits of ART treatment (Bangsberg *et al.*, 2000; 2001; Chesney, *et al.*, 1999; Paterson *et al.*, 2000). Although numerous factors contribute to the success or failure of ART medication, compliance remains paramount. Studies have indicated that compliance is the strongest determinant of patient survival (Wood *et al.*, 2003).

In Ghana, a plethora of challenges affect the ability of PLWHA to consistently comply with antiretroviral drug regimens. These problems appear to be due to a number of psychosocial, cultural and religious orientation shared about individuals infected with HIV/AIDS and are mostly negative. In keeping with Ghana's commitment to provide ART to all PLWHA, these setbacks present a major challenge to optimal compliance (NACP, 2010).

These barriers, which include psychosocial barriers can be seen in situations where persons diagnosed with HIV often debate with health workers on why they should disclose their status to others. They also engage health workers on who they should disclose their status to and how to go about disclosing their status. This usually results from the difficulties associated with status disclosure and the perceived negative

reactions and outcomes following disclosure. Some of the difficulties include discrimination and stigmatization by family, friends and significant others (GAC, 2012).

Additionally, some socio-cultural groups believe that HIV/AIDS can be transmitted through supernatural influences or to be punishment for sexual immorality. This misconception has shaped attitudes towards PLWHA (GAC, 2012). This wrong perception has played its part in the spread of the disease since most infected persons would choose to remain silent about their status for fear of victimization and discrimination. This is common among those who have been infected through sex and would not want to be branded by society due to no fault of theirs (Paxton 2002).

Finally, the religious orientation about HIV/AIDS makes it difficult for some PLWHA to disclose their status. The high moral standards and expectations placed on members by most religious groups make it virtually impossible for PLWHA to disclose their status. A positive HIV status is associated with sexual immorality and the result of a wayward lifestyle. Most PLWHA for fear of condemnation and isolation avoid such groupings altogether.

The transmissibility of antiretroviral resistant viruses from person to person further compounds the problem as a clinical and public health challenge for Ghana in managing the spread of HIV/AIDS.

The import of this state of affairs is what sets the stage for the study and raises questions about some of the unknown causes and factors affecting PLWHA's compliance to ART medication. Some of the problems associated with HIV/AIDS medication compliance

that this research will seek to examine are: why do some PLWHA fail to comply effectively with the ART medication even though they are persistently advised by health professionals to do so? The study also assesses if PLWHA consider status disclosure as a necessary and important factor in facilitating compliance to medication.

The current study deals with factors that influence PLWHA disclosing their HIV status and their compliance to ART medication. The current study also examines if by disclosing one's HIV status, one's compliance to ART medication improves.

## **1.2 Research Questions**

To achieve the objective of this study, the research sought to answer these research questions:

1. Do socio-demographic factors influence status disclosure and compliance to medication?
2. Does disclosure of HIV/AIDS status lead to compliance with medication by PLWHA?
3. Are there barriers or factors preventing PLHWAs from disclosing their status?
4. Do PLWHA perceive status disclosure as important?

### **1.3 Research Objectives**

The study sought to examine the relationship between status disclosure and ART medication compliance among PLWHA. The main objective is to explore whether background characteristics affect disclosure of HIV status and compliance to medication, and whether status disclosure affects compliance to medication.

Specifically, the research sought to:

1. Examine whether socio-demographic factors influence status disclosure and compliance to medication.
2. Assess the effect(s) of HIV/AIDS status disclosure on medication compliance.
3. Examine factors or barriers preventing status disclosure by PLWHA.
4. Assess PLWHA's perspectives on the importance of status disclosure.

### **1.4 Definition of Concepts**

#### **Disclosure**

According to Rabkin *et al.*, (2005), disclosure of HIV status is letting a trusted person(s) who is /are willing to assist PLWHA clinical treatment after knowing about the individual's HIV status. Some other experts define disclosure of HIV status as letting people know about the individual's HIV status. They explained that the HIV status is always known to the infected person (following an HIV test); that is why disclosure is usually regarded as a process that leads to the act of telling rather than just the act of

telling (Levy *et al.*, 2001). A newly diagnosed HIV person once informed of the person's status generally keeps the information to him/herself and debates the issues around telling or not telling before he/she finally decides to disclose his/her status (Pettrak *et al.*, 2001). For the purpose of this research, the Rabkin *et al.*, (2005) definition of disclosure will be adopted.

### **Compliance**

Compliance, for the purpose of this research, is the ability of a PLWHA to consistently follow his or her medication schedule as directed by a healthcare personnel (Weiss and Britten, 2003). In that regard, the PLWHA is regarded as non-compliant if he/she deviates from the healthcare person's directions irrespective of the reasons for deviation (Rabkin *et al.*, 2005; Weiss and Britten, 2003). Compliance has also been defined as the extent to which informed PLWHA follow the instruction they are given by a health worker for a prescribed treatment (Rabkin *et al.*, 2005).

### **1.5 Significance of Study**

The researcher observed the high rate of non-compliance to HIV/AIDS medication at the Fevers Unit, Korle-Bu Teaching Hospital while working as a Health Educator (National Service) and subsequently as a research assistant to the heads of the unit between 2009 and 2011. Some PLWHA's were defaulting clinic attendance and failing drug therapy due to inconsistent and poor drug compliance. Upon counseling most of the PLWHA who had been referred by physicians for drug compliance and reinforcement counseling sessions, it became increasingly clear that most of the PLWHA lacked a support system and motivation to comply with drug regimens. In the researcher's discussion with staff at the HIV unit of the Nsawam Government Hospital, during regular field trips to the Nsawam-Adoagyiri Municipality, the same concerns of ART medication non-compliance by PLWHA emerged as one of the key challenges to health workers providing HIV/AIDS care at the unit. This further aroused the researcher's interest in the subject as a topical issue worth investigating.

The significance of this study is therefore to assess the determinants of status disclosure and compliance of PLWHA to ART medication. The study therefore assesses if disclosing one's HIV/AIDS status has any effect on how one complies with ART medication. It will also provide insights into how any realized linkages can help health workers providing health care in HIV/AIDS treatment clinics better approach the ever troubling problem of drug non-compliance amongst PLWHA.

Owing to the fact health care providers feel discouraged when PLWHA begin to fail drug treatment, this study will go a long way to provide them with an opportunity to design a treatment plan to tackle ART drug non-compliance. In that regard, health care workers would put in place as part of their treatment protocol a session to guide PLWHA on the need and benefits of disclosing their status; in order to make their treatment plan more effective.

## **1.6 Organisation of Study**

Chapter One captures the Background to the study, the problem statement, Objectives, Significance of the Study, Definition of Concepts and Organisation of the study. Chapter Two comprises Literature Review and Conceptual Framework. This Chapter delves into relevant literature on HIV/AIDS status disclosure and medication compliance and contains a conceptual framework explaining the various links that exist between status disclosure and medication compliance among PLWHA. Chapter Three presents the methodology of the study, outlining the sampling techniques that are used in the study, data collection methods and tools, sources of information, as well as how the data collected is analyzed. This chapter also offers an overview of the Nsawam- Adoagyiri Municipality covering areas such as Health Facilities, Population and HIV/AIDS management in the Municipality. Chapter Four presents Analysis and Discussion of Findings based on data that has been gathered from the field. Chapter Five covers the conclusion drawn from the analysis of data and the recommendations put forward for policy or future research.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter deals with review of literature that has bearing on the subject. The essence is to examine some existing literature on HIV/AIDS status disclosure and medication compliance in order to provide a foundation and support for the study.

#### **2.1 Patterns and Outcomes of Disclosure**

Disclosing one's HIV positive status takes many forms and patterns. For example, most PLWHA tend to grapple with how to disclose their status to significant others in their lives. Some prefer doing it with the help of a health care professional whereas others opt to do it by themselves at their own convenience. A study that assessed status disclosure patterns was conducted by Ateka (2003) among HIV positive women at three prenatal sites in the United States of America. The study found that over 80 percent of respondents had disclosed their status to partners and other social contacts.

Furthermore, a Fisher's exact test was used to test the relationship between partner's HIV status disclosure and breakdown in partner's social support. The results showed a statistically significant relationship between partner's HIV status disclosure and breakdown in partner's social support. Partners of HIV positive women who were HIV negative or were not aware of their own status still supported their spouses whereas HIV

positive male partners broke their relationship with their HIV positive spouses following disclosure of their wives status.

A qualitative study was undertaken in Soweto, South Africa, by Nachega *et al.*, (2006) among PLWHA on ART medication and healthcare providers. It was found that PLWHA, who had not disclosed their status because they feared the stigma associated with HIV/AIDS in their country, missed out on the potential support derived from family or loved ones. They found that this negatively affected PLWHA compliance to ART medication. For example, while taking their medication, some doses were missed or skipped because PLWHA had to hide from people they had not disclosed their HIV status to; due to fear of stigmatization and discrimination. The Nachenga *et al.*, (2006) study included interviews with health workers. It was reported that healthcare workers viewed disclosure of HIV status as a sign of acceptance of the condition and key to a lifelong commitment to treatment compliance which is so critical to ART regimens. Health Care Workers additionally highlighted disclosure as an important step to obtaining support for ART medication compliance.

Another study by Black and Miles (2002) among African-American women in the United States indicated that many PLWHA conduct disclosure in a selective manner that seeks to balance perceived concerns regarding the realization of positive outcomes (e.g., accessing support, building trust) and the avoidance of negative consequences (e.g., experience of discrimination, stigmatization). Similarly, a Botswanan study by Hardon *et al.*, (2006) observed that some spouses (especially men) as a result of not accepting their HIV positive status blamed their spouses for the infection and this led to some violence and

abuse towards their spouses. Spouses' violent reaction affected PLWHA compliance to ART negatively as they hid their medication at neighbour's or friend's houses and had to depend on their neighbor's or friend's schedules for access to take their ART medication.

## **2.2 Barriers to Disclosure**

Disclosure is generally a difficult experience for most people living with HIV/AIDS. Most PLWHA often fear the outcome and reaction from the people they wish to disclose their status to even though the reaction may be quite contrary to their expectation. Quite often, an individual's perception of the positive HIV status determines how that individual will respond to the information that they are HIV positive. Negative perceptions can lead to an individual's self-imposed segregation from society and perhaps non-disclosure of their HIV status to others. Positive perceptions about a positive HIV status can lead to acceptance, comfortability and therefore disclosure (Lévy *et al*, 1999; Paxton, 2002).

For over close to three decades of the HIV/AIDS disease in Ghana, disclosure of one's status still remains an arduous task for most HIV positive individuals and a real challenge in providing treatment and clinical care (NACP, 2011).

There are a number of factors that constitute barriers to PLWHA disclosure decisions and tendencies. According to a study conducted by Melude (2007) in the UK, PLWHA did not disclose their status because they felt they would lose the trust of their family members and loved ones.

Another barrier that affects PLWHA's willingness to disclose their status is the fear of rejection, abuse and abandonment by family and friends. Spousal relationships could be strained leading to violence and emotional abuse. Siblings and extended relatives could reject and withdraw from the PLWHA who may have been expecting comfort and support following disclosing their HIV status (Levy *et al.*, 1999).

Furthermore, HIV/AIDS has always been associated with sexual misconduct, and therefore PLWHA did not disclose their HIV status for fear of being stigmatized. People dislike being labeled or branded as the one that is HIV positive because of sexual impropriety. This is especially true for individuals who either became infected with HIV through unfaithful marriage partners or blood transfusions (Paxton, 2002).

In a quantitative research by Deribe *et al.*, (2005) on the determinants and outcomes of HIV status disclosure to sexual partners in Southwest Ethiopia, it was found that among the women who did not disclose their HIV status, about 63 percent said that it was due to fear of partner's reaction (fear of abandonment, rejection and accusation of infidelity). However, the study concluded that the anticipated partner reactions and their actual reaction were different. The current study will determine if there are particular barriers be they cultural, psychological or social barriers that contribute to status non- disclosure and how that affects PLWHA compliance to medication.

McGregor, (2007); Klitzman *et al.*, (2004) also discovered in separate studies that barriers preventing PLWHA from status disclosure included the fact that people were ashamed to be seen attending health facilities that are said to treat HIV/AIDS and HIV related symptoms. Some of the studies also found that PLWHA's attendance to clinic for

treatment was poor and their compliance to medication was often interrupted due to non-disclosure of their status. Such interruptions, the studies found, led to PLWHA receiving less support than they otherwise might have needed in their treatment.

The decision to disclose one's HIV status to others has been described in terms of "competing consequences" (Serovich, 2001) or as a "calculus of disclosure" by researchers (Black and Miles, 2002). In other words, disclosing one's HIV status is a tall order for PLWHA; it may well be one of the most difficult things PLWHA struggle with throughout the course of their treatment process.

Disclosure may give rise to stigmatization, discrimination, neglect and all the other plethora of reactions that follow when one's HIV positive status is disclosed. Disclosure is typically not a preferred alternative for most PLWHA upon learning of their status, although it may well be an opportunity to receive social support and encouragement from significant others to foster PLWHA's compliance to ART treatment (Klitzman *et al.*, 2004).

Disclosure could facilitate PLWHA seeking medical treatment for if one has not disclosed one's status, it is difficult to access treatment when one begins to experience symptoms and the disease begins to progress. When one has openly disclosed one's HIV status to all, one feels a lot confident to seek treatment; knowing that they are not being judged but instead supported in managing their condition. This psychologically relieves the HIV positive individual to be more compliant to ART treatment (Pettrak *et al.*, 2001).

### **2.3 Factors affecting Medication Compliance**

Studies show that in taking their ART medication, compliance is influenced by a range of factors. According to Abah *et al* (2004), ART regimen requires 95 percent to 100 percent compliance for an effective outcome. However difficulties such as; time to take their medication, treatment supporter to remind the PLWHA to take their medication, side effects (if any) and even the motivation to take one's medication are major hurdles to succumb in the treatment process.

A WHO (2006) study was conducted in three different African countries (Botswana, Tanzania and Uganda) to determine compliance levels and identify factors that facilitated or impeded compliance to medication among PLWHA. It was found that status disclosure and acceptance of one's HIV status were among factors that facilitated compliance to medication. A study by Nischal *et al*, (2005), conducted amongst an Indian population, found that social, emotional and financial support from the family and society were critical factors affecting compliance to medication and in their absence, optimal compliance to medication is challenged.

### **2.4 Relationship between Disclosure and Compliance**

To date, HIV/AIDS status disclosure and ART compliance have largely been examined separately within the research literature. However some studies suggest that HIV/AIDS status disclosure holds multiple associations with medication compliance (Klitzman *et al.*, 2004).

Firstly, some PLWHA have stated poor compliance to ART medication due to concerns that their HIV status may be suspected by others and subsequently result in stigmatization (Catz *et al.*, 2000; Chesney *et al.*, 2000; Chesney and Smith, 1999; Demas *et al.*, 1995; Gibb *et al.*, 2003; Klitzman *et al.*, 2004; Siegel *et al.*, 2000). Secondly, non-disclosure may protect HIV/AIDS individuals from stigmatization but it can also deny access to social support for compliance which may undermine compliance behaviour (Chesney and Smith, 1999). Some studies have found direct and/or indirect relationship between disclosure or non-disclosure of HIV status and compliance to ART medication. For example, Kalichman *et al.*, (2003) found that greater status disclosure predicts higher social support among samples of HIV positive adult men and women.

In a study by Stirratt *et al.*, (2006) in New York on the relationship between status disclosure and compliance to antiretroviral medication, it was found that status disclosure influences compliance to ART regimens for some PLWHA. For example they found that approximately, one participant in five missed ART doses in the last two months due to concerns regarding disclosure. They also found that greater disclosure to family members and close personal contacts corresponded to higher rates of medication compliance. Consequently, disclosure remained a significant explanatory factor with regard to compliance after controlling for other compliance-related variables in multiple regression analysis. The connection between social support and ART medication compliance thus highlighted a related issue- disclosure of one's HIV/AIDS status.

Similarly, a Ugandan study by Bajunirwe *et al.*, (2009) assessed survival and retention in care and a prospective evaluation of patients on ART for at least 6 months. Their findings were similar to findings of other studies which showed that, PLWHA's failure to disclose HIV status to at least one family member was significantly associated with non-compliance to ART medication. This research seeks to explore if indeed the failure by PLWHA to disclose their HIV/AIDS status to at least even one person in their lives significantly affects medication compliance in their treatment process.

Non- disclosure of one's HIV positive status has been found to lead to poor compliance to ART amongst PLWHA on ART treatment. In related studies by Klitzman *et al.*, (2004) and Peretti- Wattel *et al.*, (2006), it was found that most PLWHA who had not disclosed their status shudder from being seen by others they had not disclosed their status to and this resulted in PLWHA missing or skipping dose(s). Additionally, the study also found that PLWHA who had not disclosed their status were also less likely to be compliant as they are susceptible to miss or delay their drug use since there was no support or someone to remind them to take their medication. Often, this state of affairs leads to compliance challenges and poor management of possible side effects from drug use making it difficult to effectively manage the PLWHA's condition.

In a study conducted by Mills *et al.*, (2006) in both developing and developed countries on barriers and facilitators to ART adherence, it was found that in both developed and developing countries, fear of disclosure was one of the factors that impeded compliance to ART medication.

As a result of the fear of disclosure, PLWHA avoided taking their medication in public places and this resulted in PLWHA missing doses. Additionally, the fact that the HIV clinic was separate from the main hospital was reassuring to other PLWHA and appeared to be a factor in facilitating compliance to clinic attendance and therefore care.

This in essence showed that, PLWHA went to great lengths to avoid been seen taking their medication by others due to non-disclosure of their status; the end results being sub-optimal compliance to medication use.

Furthermore, Sankar *et al.*, (2006) did a study among PLWHA on ART using a qualitative methodology. The results suggested that fear of exposing one's status was a deciding factor and barrier to clinic attendance and therefore, compliance to ART medication. People dislike being labeled and tagged as a person that is HIV positive is largely suspected to be promiscuous. This is usually the case for individuals who got infected with HIV through an unfaithful marriage partner or blood transfusion (Paxton, 2002). For such individuals non-disclosure is the preferred option and the way to go.

Another study by Catz *et al.*, (2000) in Milwaukee, Wisconsin among PLWHA taking ART medication used the self-reported medication compliance assessment to identify some of the barriers thought to be affecting PLWHA's compliance to ART. It found that 71 percent of the study population reported that concern about the outcome of their HIV status disclosure was a major barrier to ART medication compliance.

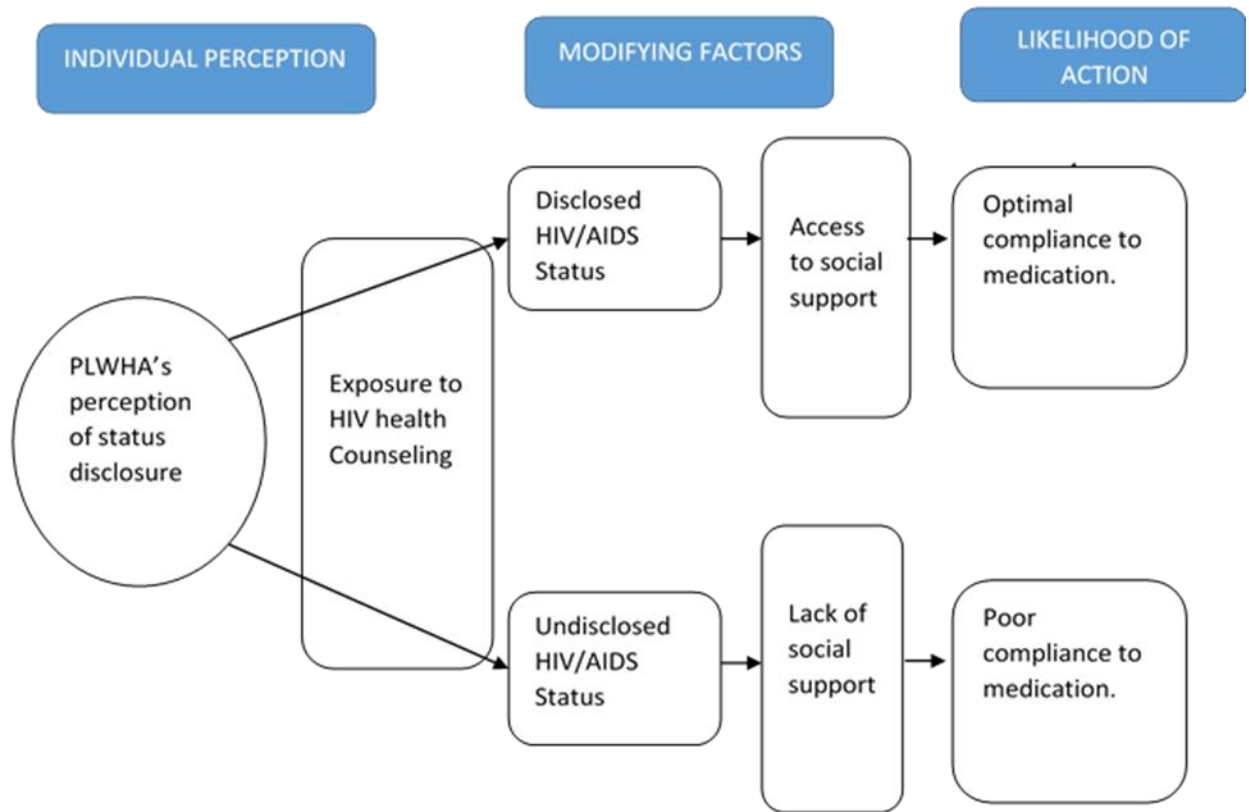
In conclusion, disclosure of one's HIV status has been shown to affect compliance to ART medication in several studies. Disclosure of one's HIV status therefore cannot be over-emphasized in promoting effective compliance to ART medication. This study assesses if status disclosure facilitates PLWHA's compliance to ART medication.

## **2.5 Conceptual Framework**

The Health Belief Model (HBM) is a psychological model that attempts to explain and predict health behaviors. This is done by focusing on the attitudes and beliefs of individuals. The HBM was first developed in the 1950s by social psychologists Hochbaum, Rosenstock and Kegels working in the U.S. Public Health Services. The model was developed in response to the failure of a free tuberculosis (TB) health screening program. Since then, the HBM has been adapted to explore a variety of long- and short-term health behaviors, including sexual risk behaviors and the transmission of HIV/AIDS. Some issues of concern that the model sought to address were: Why do some people use health services but others do not? Why is there a high rate of non-compliance with health and medical care recommendations? What are the factors that prevent or interfere with people's following of health care recommendations?

In adapting this model to the concepts of interest in this research, the following relationships can be established.

**Figure 1: Conceptual Framework (Assessment of Status Disclosure on Medication Compliance among PLWHA)**



**Source:** Author's Conceptual Framework- Health Belief Model (Adapted from Glanz et al, 2002)

The Health belief model provided the framework from which linkages were drawn to inform this study as shown in Figure 1 above. The model shows that in making a decision to disclose their status, a PLWHA's perception of the possible outcomes; that is their perception of the benefits against the disadvantages of status disclosure informs the likelihood of a PLWHA either disclosing their status or not. These options must be weighed by the PLWHA's in making a decision to disclose their status.

As stated by the Health Belief Model, the individual must assess the options to determine which disclosure decision will lead to the best or preferred outcome. In applying the given framework above to explain the various linkages in the current study, an individual's perception (in this case, a PLWHA) of the outcome of status disclosure is critical and serves as the basis for predicting whether a PLWHA discloses his/her status or not. As depicted in Figure 1, the modifying factor required here is exposure to HIV counselling for the PLWHA. This counselling process explores the benefits of status disclosure with the PLWHA; one of which includes, access to social support which increases the likelihood of optimal compliance to the ART medication. In contrast to that outcome, the HIV counselling also presents an alternative course of action where a PLWHA by choosing not to disclose their status, does not gain access to social support and thus shows poor compliance to the ART medication. Ultimately, the fundamental presupposition of the Health Belief Model is that individuals are rational decision makers who will select a course of action after systematically evaluating and comparing the perceived benefits and disadvantages of each possible outcome.

## **CHAPTER THREE**

### **PROFILE OF THE STUDY AREA AND METHODOLOGY**

#### **3.0 Introduction**

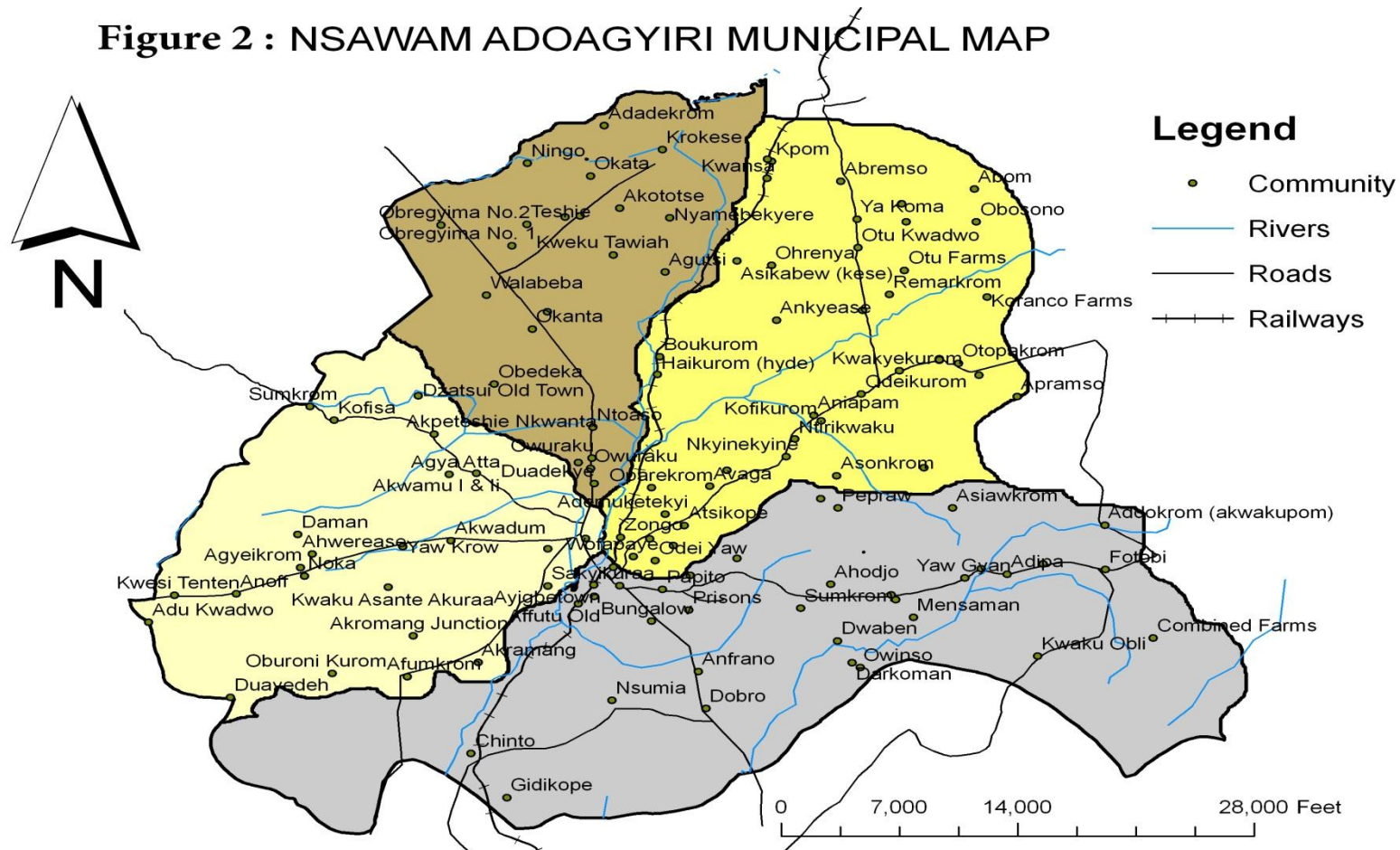
This chapter describes the study area and the approaches used to collect data.

#### **3.1 Profile of Study Area**

The profile of the study area was compiled using information from the Akuapem South Composite budget (2012), the 2010 Population and Housing census report and the Nsawam- Adoagyiri Municipal Assembly Medium Term Development Plan for 2012-2013.

The Nsawam- Adoagyiri Municipality was formed out of the Akuapem South Municipality. The Municipality has its capital at Nsawam, which is fairly an urban community and merges with Adoagyiri, another urban community. The two towns are separated by the Densu River. The Municipal is about 23 km. from Accra. It is bordered to the South by the Ga and Tema Municipalities in the Greater Accra Region and to the North by Akuapem North Municipality and to the West by Suhum-Kraboia Coaltar District and the West Akim Municipality. The proximity of the Municipality to Accra and Tema is a potential for development. Figure 2 is a map of the Nsawam- Adoagyiri Municipality.

**Figure 2 : NSAWAM ADOAGYIRI MUNICIPAL MAP**



Source: Akuapim South Composite Budget, 2012

### **3.1.1 Population**

According to the 2010 Population & Housing Census- district analytical report, Nsawam-Adogyiri Municipality recorded a population of 86,000, comprising 42,733 (49.7%) males and 43,267 (50.3%) females with the urban population (50,864) outnumbering that of the rural population. The density of the population is 465 persons per square kilometer.

#### **Age and Sex Structure**

The 2010 Population & Housing Census report showed that Nsawam Adoagyiri's population were within ages 15-64 years. This showed that the age structure of the population in the municipality is skewed towards the youth and economically active group. This was followed by age groups 0-14 years whilst the population within the age groups 65 years and older records the lowest. The general pattern of the age and sex structure shows consistent decrease in the size of age groups with increasing age as can be seen for both sexes, from age 15-19 years and older. The age structure and the sex composition of the population of the municipality follow the regional pattern. Apart from the age group 65years and older, where the females are slightly more than males, the male population out-numbered the female population in all the other age groups. It is worth noting that in all the age groupings majority of the population live in the urban areas of the municipality.

### 3.1.2 Health

According to the Municipality's Medium Term Development Plan, (2010- 2013), the major health burdens of the municipality are in the areas of:

1. Buruli ulcer
2. Maternal mortality
3. Under 5 malnutrition
4. Food hygiene and safety
5. Environmental sanitation
6. Environmental management (pollution of Densu River).
7. HIV/AIDS infection

The Municipality with one hospital and other service levels, has 135 beds with 8 doctors made up of 5 specialists, and there are 79 nurses with 20 paramedics. With the population of 133,604, the doctor/patient ratio is 1:16,000, which is higher than the National Standard of 1:10,000. Additionally, there are 25 midwives at the static points in the Municipality.

Furthermore, out of the required number of 30 Community Health Nurses for the outreach clinic. There are only 24 currently available leaving a backlog of 6 Community Health Nurses in the Municipality. (Medium Term Development Plan, 2010- 2013)

### 3.1.3 HIV/AIDS

The level of HIV/AIDS incidence in the Municipality is not known. However there were 198 PLWHA in the year 2006, with 130 orphans whose parents died due to HIV/AIDS infection. HIV/AIDS awareness is believed to be above 90 percent in the Municipality. According to information given by the HIV/AIDS coordinator at the Municipal Health Directorate, the centrality of the Nsawam-Adoagyiri Municipality makes it an attractive destination for the individual's from surrounding towns.

HIV/AIDS cases are primarily managed at the HIV unit of the Nsawam Government Hospital. According to the nurse in charge of the HIV/AIDS unit, about 80% of cases reported at the HIV unit are usually referrals from first level clinics or health centers within and outside the Municipality. Health workers at the HIV unit usually conduct a confirmatory test on all referred cases and further counsel individuals on the results of their diagnosis. Individuals found to be HIV positive are processed and taken through ART regimen counseling where required.

The HIV unit is managed by a medical team comprising: 1 doctor, 3 nurses and 2 counselors with support from 2 laboratory staff workers, and operates on 2 clinic days on per week. "Clients" as PLWHA at the unit are referred to, report to the HIV unit on appointment dates for review. Their first point of call after retrieving their folder(s) is to see the doctor. Following review of their labs and other vital information, clients proceed to the pharmacy (for those on ART medication) to receive the prescribed dose(s) of drug combination. New cases are seen by the doctor for longer periods and based on lab results the client is scheduled for compliance counseling and initiated on ART drug combination.

Counseling is done in different stages, the counselors at the HIV unit usually provide counseling on pre and post-test counseling, risk assessment and risk reduction counseling as well as preventive and palliative counseling following drug initiation. The second stage of counseling is at the pharmacy where clients are taken through ART medication compliance counseling by pharmacists. Further counseling is done in cases of drug defaulting, clinic attendance defaulting and status disclosure challenges to reinforce and encourage clients on the need to take necessary actions to promote their wellbeing.

### **3.2 Methodology**

This section focuses on the methodology used to select the target population used for study. The section further outlines the techniques used for selecting the samples and respondents for the study, and for collecting the data.

#### **3.2.1 Study Population and Sampling**

The study population consisted of PLWHA on antiretroviral medication attending clinic at the HIV unit of the Nsawam Government Hospital. A non-random sampling method was used; this is because as PLWHA's have a unique characteristic, it makes it difficult to reach and interview them.

The HIV unit currently has a total number of 204 PLWHA, out of which 90 are on ART medication. Those on ART consist of 59 females and the 31 males. All 90 PLWHA on ART medication were listed for the study. However, 83 PLWHA were willing and available to be interviewed as respondents for the study, consisting of 17 males and 66 female respondents on

ART. The higher proportion of females than males at the HIV unit was also naturally reflected in the study, as there were more female respondents than male respondents.

### **3.2.2 Sources of Data and Data Collection Technique**

Information for the study was gathered from both primary and secondary sources. The primary source was with a questionnaire used to obtain responses from the respondents. Other data sources included relevant data obtained from the Municipal Health Directorate, the Pharmacist in charge of HIV/ AIDS at the hospital and counselors at the HIV unit of the Nsawam Government Hospital. Additional data was also drawn from published and unpublished sources including books, journals and internet websites.

### **3.2.3 Data Collection Technique**

Questionnaires were used to gather relevant data related to the respondents. Interview sessions with the respondents was conducted in the offices and counseling rooms of both the HIV unit and the pharmacy on clinic days for PLWHA on ART medication. The researcher was introduced to the respondents by the counselors and pharmacist and formal permission was sought from each willing respondent before interview. The purpose of the research was explained to the respondents and confidentiality of their responses was assured. The questionnaire had three main sections with both open and closed ended questions. The first section dealt with socio-demographic characteristics of the respondents. Some relevant information obtained here included: respondents' gender, marital status, occupation and partner's educational attainment among others.

The second section of the questionnaire assessed PLWHA status disclosure experience. Essentially, questions were if they had disclosed their status; who they disclosed their status to; why they disclosed their status to the said individual(s); which barriers prevented them from disclosing their status if they had not; how many people they had disclosed to and what had been their experience following disclosure. The third section of the questionnaire sought information on compliance of PLWHA to medication. This was done using a Likert scale which assessed the PLWHA self-report of their compliance to medication. The Likert scale used sought to assess respondents' behaviour and attitude towards the various compliance measures defined in the study.

The respondents therefore indicated how closely their feelings and attitudes matched the statements on a rating scale (Always, Very often, Sometimes and Rarely). The measures of the scale represented: "Always" for optimal compliance, "Very often" for good compliance, "Sometimes" for limited compliance and "Rarely" for poor compliance. The categories were given the following values to enable scores to be generated and their compliance levels to be numerically measured: Always- 1, Very Often- 2, Sometimes- 3, Rarely- 4.

### **3.2.4 Ethical Considerations**

The author had to get clearance from the Municipal Health Directorate and the medical director of the Nsawam Government Hospital before conducting the study at the Nsawam Government Hospital. Letters of introduction obtained from ISSER was sent to both the health directorate and the hospital for clearance.

Anonymity of each respondent was stated on the questionnaire, as the rationale of the study was purely academic in nature and not as a means of benchmarking the respondents and the institution. The success and reliability of data collected was dependent on the level of confidentiality between the researcher and the respondents.

In addition, contact details of the university (phone numbers and email addresses) were stated on the letter of introduction to reinforce the fact that the research was academic in nature.

### **3.2.5 Field Challenges**

The researcher intended to interview all 90 PLWHA on ART at the HIV unit but managed to interview 83 PLWHA. This was due to the fact that not all PLWHA were willing to participate in the study.

Secondly, the researcher had difficulties in authorization and clearance from the Municipal health directorate to conduct the study and spent close to a month pursuing the Municipal health director for clearance before beginning the study.

Additionally, the HIV unit had special clinic days for attending to PLWHA during the week, hence the researcher had to spend long periods and incurred traveling expenses in going to collect data only during clinic days.

Furthermore, majority of the respondents were non-literate and semi-literates and as such required the researcher to translate most of the questions into Twi or Ga to enable them understand and provide appropriate responses. This situation further stretched the interview

sessions since the researcher took time to carefully translate and explain the questions to respondents for appropriate responses.

Lastly, due to the sensitive nature of HIV/AIDS, respondents agreed to be interviewed only when the counselors and pharmacists explained the purpose of the research to them and the researcher took time to assure respondents of confidentiality.

### **3.2.6 Data Analysis**

Data was collected, entered and analyzed using the Statistical Package for Social Sciences (SPSS) software. The study adopted two kinds of statistical measures: descriptive and non-parametric inferential statistics. Descriptive statistics was used in the summarization of data. Specifically, frequency tables and bar charts were generated to describe the basic features of the data.

Non- Parametric inferential statistics will be used to draw conclusions. Inferential statistical tests that were used in the study were the Chi-square test of independence and the Cramer's V. The Chi-square test of independence was used to determine if there was any relationship (or any form of dependency) between status disclosure and compliance to medication. This test permits calculation or testing of the null hypothesis that two variables of classification, when applied to the same set of entities are independent. The Cramer's V was used to test the strength of association between the various variables tested in the study.

Furthermore, bi-variate analysis between socio-demographics characteristics such as respondents' gender, education and marital status were examined to determine possible relationships with status disclosure and compliance to medication. All inferential statistical analysis was set at 95% probability level and a p-value of  $< 0.05$  accepted as significant.

## **CHAPTER FOUR**

### **ANALYSIS AND DISCUSSION OF FINDINGS**

#### **4.0 Introduction**

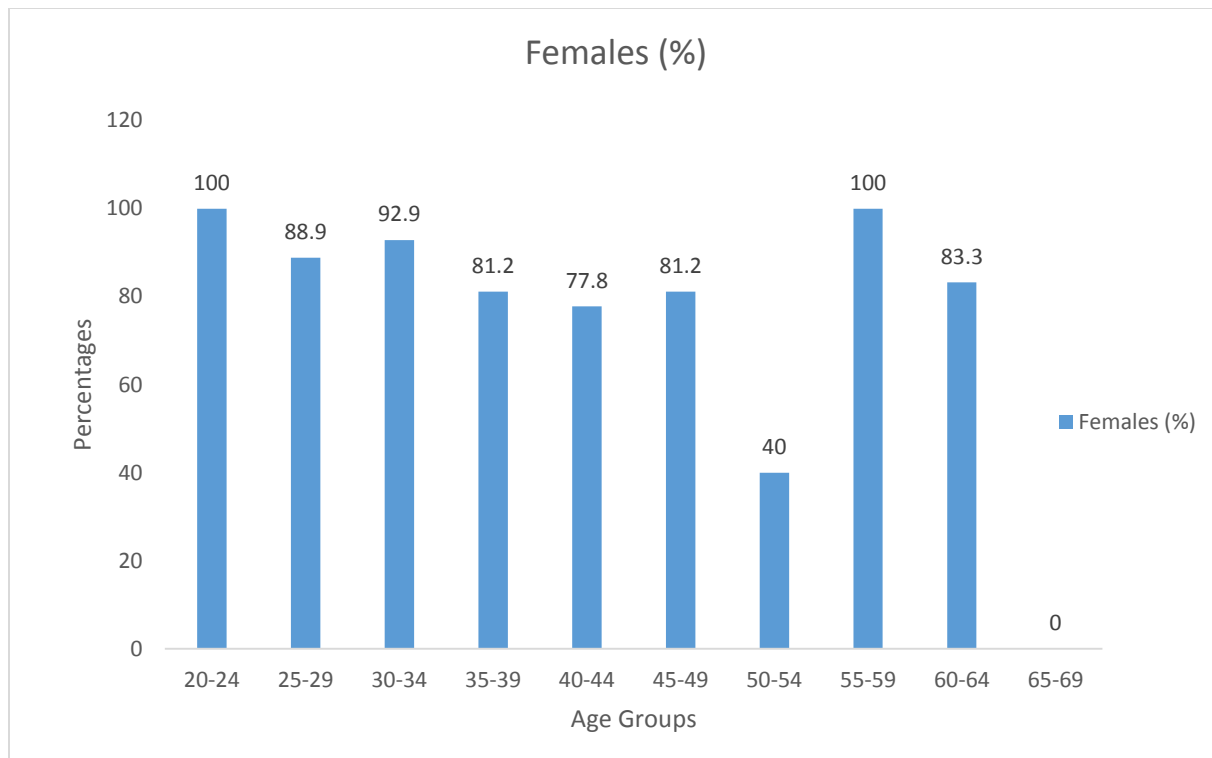
This chapter presents the analysis and interpretation of field data from the study area. The data analysis and discussion of findings have been done with the research questions and research objectives in mind.

The main objective of the study is to assess the determinants of status disclosure and medication compliance among PLWHA. A total of 83 respondents (PLWHA) were interviewed. From the responses, 58 respondents had disclosed their HIV status while 25 respondents had not.

#### **4.1 Demographic Characteristics of Respondents**

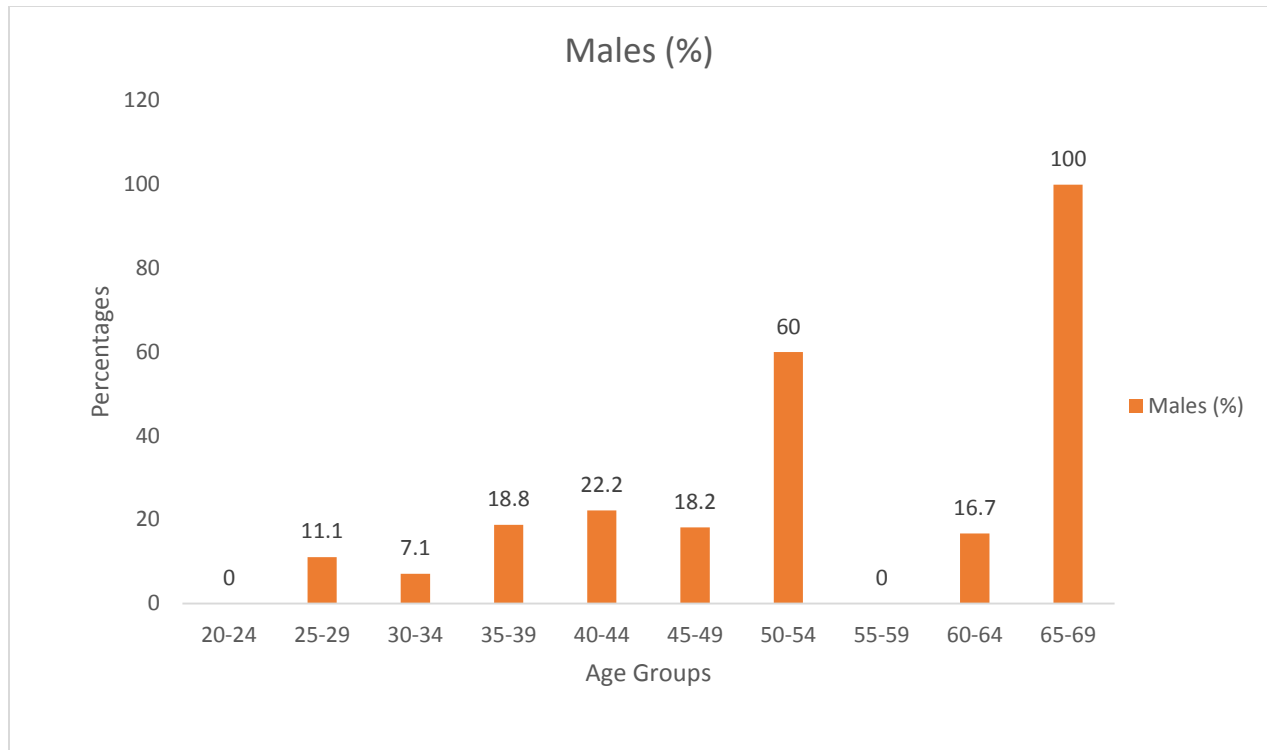
##### **Age and Sex**

The total number of respondents comprised, 17 males and 66 females representing 20.5 percent and 79.5 percent respectively. The age distribution of the respondents was between 20-69 years and the age group with the highest frequency being the 40-44 years age group comprising 22 percent for males and 78 percent for female respondents respectively. This indicated that a higher proportion of PLWHA were within the productive workforce and this distribution was seen to be consistent with a joint report by NACP (2011) which stated that there was a higher HIV/AIDS prevalence among people within the labour workforce in Ghana.

**Figure 3: Percentage Distributions of Respondents' Age by Gender (Females)**

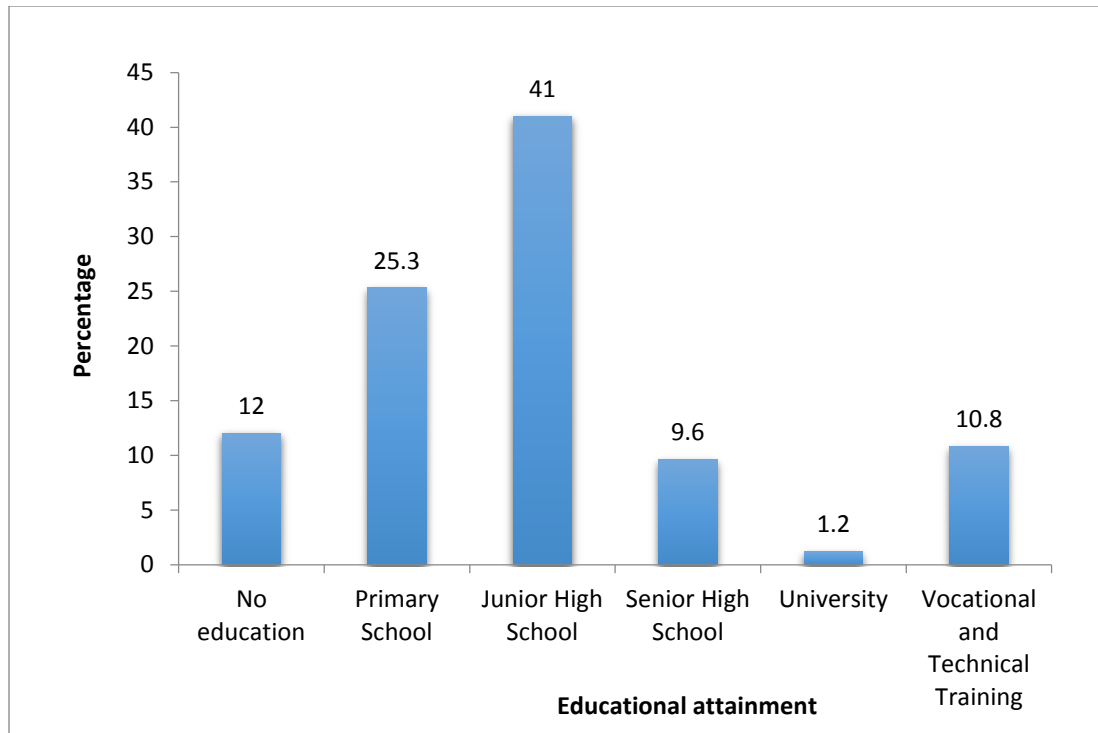
Source: Field Survey, 2013

The age by respondents' gender (females) distribution as presented in Figure 3 showed that the lowest age group for the female respondents was between 20-24 years while the highest age group was between 65-69 years. The mean age of female respondents was 40 years and the median age group was between the 40-49 years age group. Additionally, there was no female respondent within the 65-69 years age group which had a 100 percent male representation whereas the 55-59 years age group had a 100 percent female representation. The female respondents showed a higher representation than male respondents, right from the 20-24 years age group to the 60-64 years age group. This could be attributed to the fact that the target population had a larger female representation than males.

**Figure 4: Percentage Distributions of Respondents' Age by Gender (Males)**

Source: Field Survey, 2013

Figure 4 as depicted above, showed the percentage distribution of respondents' age by gender (males). It showed that the lowest age group for the male respondents was between 20-24 years while the highest age group was between 65-69 years. The mean age group of male respondents was between the 40-44 years and the median age group was between the 40-49 years age group. Additionally, there was no male respondent within the 20-24 and 55-59 years age group which both had a 100 percent female representation. The male respondents showed a higher representation than female respondents within the 65-69 years.

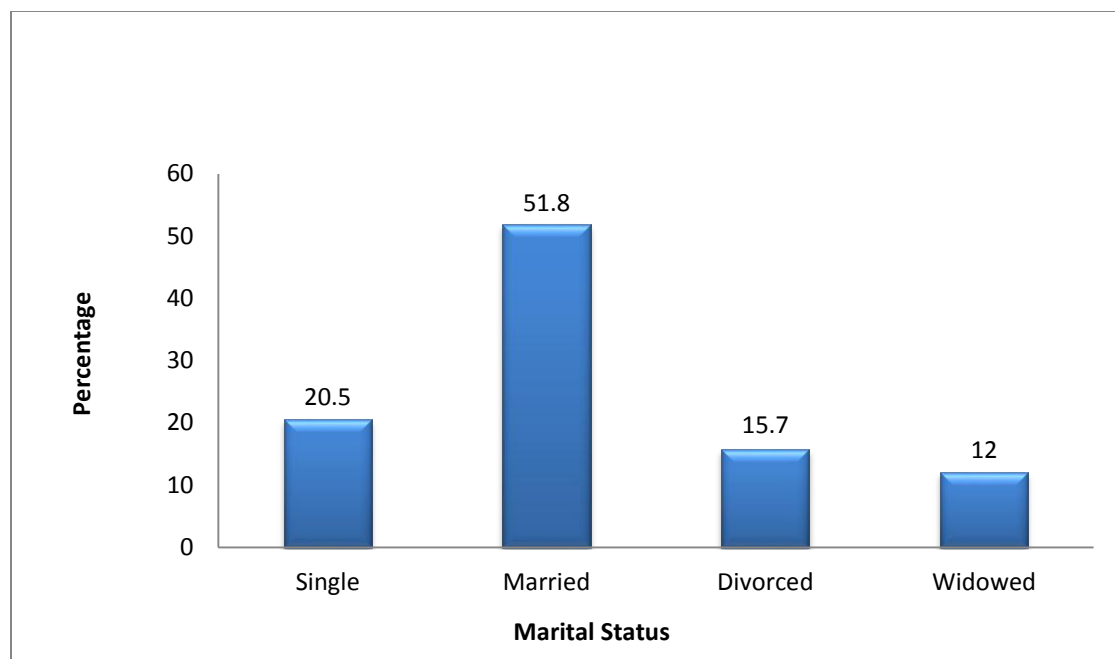
**Figure 5: Respondents' Educational Attainment**

Source: Field Survey, 2013

As presented in Figure 5, about 63 percent of the respondents had attained Junior High School education and above, with close to 10 percent attaining Senior High School education. Furthermore, only 1.2 percent of respondents had attained University education whilst 10.8 percent had attained some form of vocational and technical training.

#### 4.1.1 Marital Status

Almost 52 percent were married as shown in Figure 6. The data also showed that about 16 percent were divorced while 12 percent were widowed. The data further showed that close to 21 percent were single.

**Figure 6: Percentage Distribution of Respondents by Marital Status**

Source: Field Survey, 2013

#### 4.1.2 Occupational Status

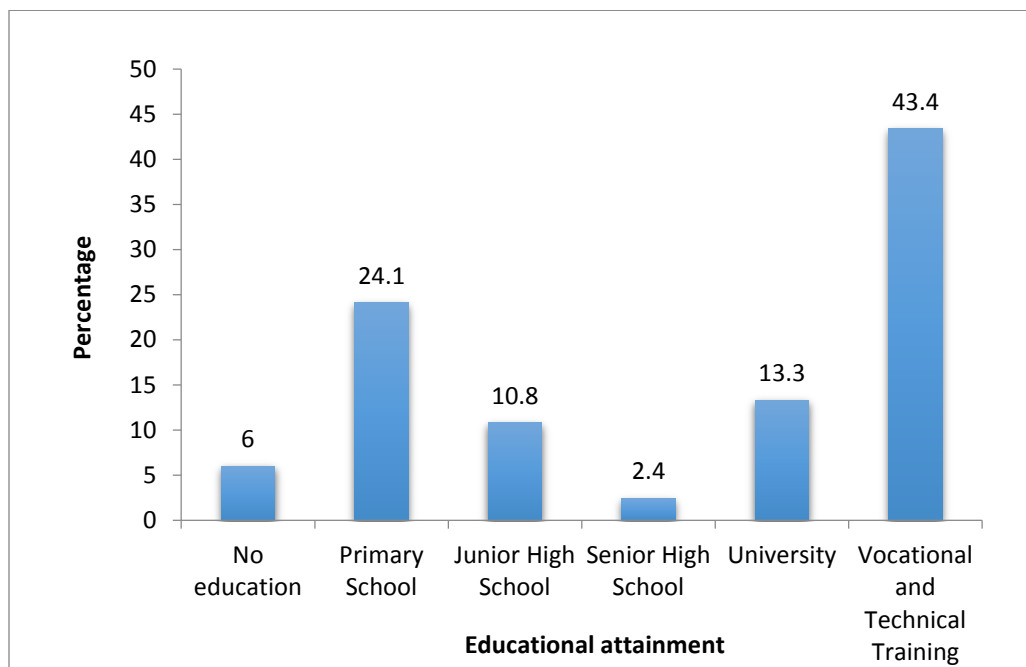
**Table 1: Occupational Status**

Respondents' Primary Occupation	N	percent
Trader	36	43.4
Artisan	1	1.2
Civil Servant	1	1.2
Unemployed	20	24.1
Other (farming, hair dressing, etc)	25	30.1
<b>Total</b>	<b>83</b>	<b>100</b>

Source: Field Survey, 2013

The data on occupational status showed that, about 43 percent were traders whilst 30 percent were engaged in some other informal economic activity such as farming, hair dressing, etc. Another 24 percent of the respondents were unemployed while civil servants and artisans both constituted 1.2 percent respectively (as shown in Table 1).

**Figure 7: Percentage of Respondents' Partners Educational Attainment**



Source: Field Survey, 2013

Information was collected on the educational attainment of respondents' partners. As presented in Figure 7, the highest proportion of respondents' partners had had some form of vocational or technical training. For example, the data showed that about 43 percent had had some vocational and technical training. The data also showed that 6 percent had no formal education whilst almost 35 percent had up to Junior High School education. Almost 3 percent had up to Senior

High School education whilst 13.3 percent of respondents' partners had attained University education.

## **4.2 Socio-Demographic Background, Status Disclosure and Medication Compliance**

In this section, bi-variate analysis were used to determine whether the socio-demographic characteristics of respondents have an association on disclosure of their HIV status and also on their compliance to medication.

### **4.2.1 Effect of Gender on Status Disclosure and Medication Compliance**

Results of the bi-variate analysis as presented in Table 2 showed that, about 71 percent of male respondents as well as close to 70 percent of female respondents had disclosed their status. Conversely, close to 30 percent of male respondents as well as 30 percent of female respondents had both not disclosed their status. The results thus showed that the rate of disclosure and non-disclosure among both male and female respondents was almost equal.

**Table 2: Gender by HIV Status Disclosure**

Sex of Respondent		Whether respondent has disclosed status to anyone		Total
		Yes	No	
<b>Male</b>	(n)	12	5	17
	(%)	70.6	29.4	100
<b>Female</b>	(n)	46	20	66
	(%)	69.7	30.3	100

Source: Field Survey, 2013 chi square (1, n=83) = 0.005,  $p > 0.05$  Cramer's V = 0.8

Some reasons given by respondents for disclosing their status during the interview included: prevention of new infections and re-infection of their sexual partners, especially for the married respondents. Some respondents who were pregnant stated that they also wanted to prevent their unborn babies from being infected since after delivery, they could be pressurized by family members to breastfeed their babies. In contrast, some respondents who had not disclosed their positive status stated that they had not informed anyone so for reasons such as to prevent stigmatization, abuse and discrimination by others.

Results of the bi-variate analysis showed that the relationship between gender and status disclosure was not statistically significant at a 0.05 significant level. Using the Cramer's V to further test the degree of association between gender and status disclosure, it showed that the degree of association (0.8 percent) which was very weak.

The study further assessed whether respondents' gender had an effect on their compliance to medication. Table 3 showed that 70 percent of female respondents had optimal compliance as against close to 60 percent of male respondents who had optimal compliance. The data further showed that almost 24 percent of female respondent had good compliance compared to 21 percent of male respondents who had good compliance. The data thus showed that a higher proportion of female respondents had higher optimal compliance than male respondents.

**Table 3: Gender by Compliance to Medication**

<b>Sex of respondents</b>		<b>Poor Compliance</b>	<b>Limited Compliance</b>	<b>Good Compliance</b>	<b>Optimal Compliance</b>	<b>Total</b>
<b>Male</b>	<b>(n)</b>	2	1	4	10	17
	<b>(%)</b>	11.8	5.9	23.5	58.8	100
<b>Female</b>	<b>(n)</b>	0	2	14	50	66
	<b>(%)</b>	0	3.0	21.2	75.7	100

Source: Field Survey, 2013 chi square (3, n=83) = 8.64,  $p < 0.05$  Cramer's V= 32.3

One key reason given by close to 50 percent of female respondents and 43 percent of male respondents for their compliance was the determination to look healthy to prevent opportunistic infections common with HIV/AIDS and also to avoid others suspecting them of HIV/AIDS. A reason given by about 10 percent of female respondents and 20 percent of male respondents was that they understood the role of the ART medication in their wellbeing and this was a motivating factor for their compliance.

The strength of percentage distributions and the results of the bi-variate analysis as presented in Table 3 above showed a positive relationship between gender and compliance to medication. The relationship was statistically significant at a 0.05 percent.

#### 4.2.2 Effect of Marital Status on Status Disclosure and Compliance to Medication

The relationship between respondents' marital status and disclosure of their HIV status was examined. As presented in Table 4, over 70 percent of married respondents had disclosed their status as compared to 65 percent of unmarried respondents who had disclosed their status. The data thus showed that the rate of disclosure was higher among married respondents than unmarried respondents.

**Table 4: Marital status by HIV Status Disclosure**

Marital Status		Whether respondent has disclosed status to anyone		Total
		Yes	No	
Married	(n)	32	11	43
	(%)	74.4	25.6	100
Not Married	(n)	26	14	40
	(%)	65.0	35.0	100

Source: Field Survey, 2013 chi square (3, n=83) = 2.01,  $p > 0.05$  Cramer's V= 15.6

The strength of the percentage distributions and results of the bi-variate analysis as presented in Table 4 above showed that there was a positive relationship between respondent's marital status and their status disclosure. The relationship was not statistically significant at a 0.05 significant level. Using the Cramer's V test, the results showed a weak association between marital status and status disclosure (15.6 percent).

Table 5 showed that almost 80 percent of married respondents had optimal compliance as compared to 48 percent of unmarried respondents. The data also showed that almost 40 percent of unmarried respondents had good compliance compared to almost 14 percent of married respondents. The data thus showed that respondents who were married had higher optimal compliance than respondents who were not married.

**Table 5: Marital Status by Compliance to Medication**

<b>Marital Status of Respondents</b>		<b>Poor Compliance</b>	<b>Limited Compliance</b>	<b>Good Compliance</b>	<b>Optimal Compliance</b>	<b>Total</b>
<b>Married</b>	<b>(n)</b>	0	3	6	34	43
	<b>(%)</b>	0.0	7.0	14.0	79.1	100
<b>Not Married</b>	<b>(n)</b>	3	1	24	12	40
	<b>(%)</b>	7.5	2.5	60.0	30.0	100

Source: Field Survey, 2013  $\chi^2(9, n=83) = 10.10, p > 0.05$  Cramer's  $V = 20.1$

The strength of percentage distributions and results of the bi-variate analysis as presented in Table 5 showed that there was a positive relationship between respondents' marital status and compliance. The results showed that the relationship was not statistically significant at a 0.05-significant level. The results further showed that the degree of association between marital status and compliance was not strong (20.1 percent).

#### **4.2.3 Effect of Education on HIV Status Disclosure and Compliance to Medication**

The relationship between education and status disclosure was examined to determine whether the educational level of respondents affected their disclosure patterns. Table 6 below showed that about 72.5 percent of respondents with primary education had disclosed their status while 27.5 percent of them had not. The data also showed that close to 65 percent of respondents with Junior High School education had disclosed their status while about 35 percent of them had not. Furthermore, about 75 percent of respondents with Senior High School education had disclosed their status while 25 percent of them had not. Additionally, there was one respondent who had attained University education and had also disclosed his status. The data thus showed that the rate of disclosure was higher among respondents who had attained higher levels of education than respondents who had not.

**Table 6: Education by HIV Status Disclosure**

Highest level of education		Whether respondent has disclosed their status		Total
		Yes	No	
Primary School	(n)	29	11	40
	(%)	72.5	27.5	100
Junior High School	(n)	22	12	34
	(%)	64.8	35.2	100
Senior High School	(n)	6	2	8
	(%)	75.0	25.0	100
University	(n)	1	0	1
	(%)	100.0	0	100

Source: Field Survey, 2013  $\chi^2(5, n=83) = 4.80, p > 0.05$  Cramer's V = 24.1

The strength of percentage distributions and results of the bi-variate analysis in Table 6 showed that a positive relationship existed between respondents' educational level and their status disclosure patterns. However, the relationship was not statistically significant at a 0.05 significant level. The Cramer's V test conducted also showed that the degree of association between respondents' educational levels and status disclosure was not strong (24.1 percent).

The study further assessed whether respondents' educational level had any effect on their compliance to medication. Table 7 showed that close to 88 percent of respondents that had attained Senior High School education had optimal compliance compared to about 73 percent of respondents with primary education. The data subsequently showed that about 68 percent of respondents with Junior High School education had optimal compliance. Consequently, the data showed that one respondent with University education had optimal compliance.

**Table 7: Education by Compliance to Medication**

Highest level of education		Poor Compliance	Limited Compliance	Good Compliance	Optimal Compliance	Total
Primary School	(n)	0	1	10	29	40
	(%)	0.00	1.2	2.4	21.7	100.0
Junior High School	(n)	2	2	7	23	34
	(%)	5.9	5.9	20.6	67.6	100.0
Senior High School	(n)	0	0	1	7	8
	(%)	0.00	0.00	12.5	87.5	100.0
University	(n)	0	0	0	1	1
	(%)	0.00	0.00	0.00	100.0	100.0

Source: Field Survey, 2013. Chi square (15, n=83) = 12.41,  $p > 0.05$  Cramer's V=22.3

The strength of percentage distributions and the results of the bi-variate analysis in Table 7 above showed a positive relationship between respondents' level of education and their compliance to medication. The relationship however was not statistically significant at a 0.05 significant level. The degree of association between educational level and compliance was found to be weak (22.3-percent).

#### 4.2.4 Relationship between Status Disclosure and Compliance to Medication

Klitzman *et al.*, (2004) postulated that disclosure of one's HIV status might be a key variable in obtaining social support and that social support could be critical in compliance to ART. This is because depending on the circumstances, disclosure or non-disclosure of one's HIV status might either facilitate or impede a one's compliance to ART medication.

Table 8 showed that about 85 percent of those who had disclosed their HIV status had optimal compliance. The data also showed that about 14 percent of those who had disclosed their status had good compliance. About 2 percent had limited compliance. However, only 44 percent of those who had not disclosed their status had optimal compliance while 40 percent had good compliance, and 8 percent had limited and poor compliance respectively.

**Table 8: Status Disclosure by Compliance to Medication**

Has status being disclosed	Compliance level (Percentage)					
	Poor compliance	Limited compliance	Good compliance	Optimal compliance	Total (%)	Total (N)
Yes	0.0	1.7	13.8	84.5	100.0	58
No	8.0	8.0	40.0	44.0	100.0	25

Source: Field Survey, 2013; Chi-Square= (3, n=83) =16.037,  $p < 0.05$  Cramer's V= 44.0

The relationship was found to be statistically significant at a 0.05 significant level. Using the Cramer's V to further test the degree of association between status disclosure and compliance, the test showed a moderately strong association between status disclosure and compliance (44 percent).

These findings suggest that there is a relationship between respondents' status disclosure and compliance to medication. The results showed that 84.5 percent of respondents who had disclosed their status had optimal compliance as compared to just 44 percent of those who had not disclosed their status.

The study also sought to assess the implications disclosing one's HIV status had on one's compliance to medication. Over 80 percent of the respondents stated that their medication use had been affected after disclosing their status compared to 13.7 percent of respondents, who stated that their medication use had not been affected (Table 9).

**Table 9: Status Disclosure by whether Medication has been affected**

<b>Has status disclosure affected medication use</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>yes</b>	50	86.3
<b>no</b>	8	13.7
<b>Total</b>	58	100.0

Source: Field Survey, 2013

Results in Table 10 gives a breakdown of how respondents' medication use had been affected after they disclosed their HIV positive status. Out of the 58 respondents who had disclosed their status, about 85 percent of them claimed that their medication use had improved and that they felt more relieved and motivated to take their medication. This confirms results obtained earlier (Table 8) in which respondents who had disclosed their HIV positive status tended to have higher optimal compliance to medication.

**Table 10: Effect of Status Disclosure on Medication Use**

	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>medication use has improved</b>	49	84.5
<b>not applicable</b>	9	15.5
<b>Total</b>	58	100

Source: Field Survey, 2013

These findings are similar to those by Klitzman *et al.*, when they did a study in 2004 to assess the effects that came about as a result of HIV status disclosure or non-disclosure amongst PLWHA taking ART in New York. The findings of their study indicated that status disclosure might have been a key component in obtaining social support and that social support could have been important for compliance to ART.

After disclosure, it made it possible for significant others to remind PLWHA of their medication in case they forgot to take it. This relieved the individual of the daily routine of having to recall taking their medication. They could also freely take their treatment anywhere, whenever it was time to do so. Lastly, compliance to strict timing of ART medication would also be facilitated. In effect, HIV status disclosure does play a part in respondents' compliance to ART medication.

### 4.3 Barriers Preventing PLWHA from Disclosing their Status

In spite of all the researches advancing the potential benefits of HIV status disclosure, interviews conducted with respondents who had not disclosed their HIV status revealed that there were barriers that continuously militated against disclosing their status.

They stated that these barriers existed in varying forms. While some of these barriers were perceived or psychological, others were experiences most of them were grappling with in their ART treatment process. Twenty-five (25) respondents (30%) had not disclosed their HIV status to anyone since their diagnosis. The data in Table 11 showed the reasons given for not disclosing their sero-positive status.

**Table 11: Barriers against Disclosure of HIV Status**

<b>Barriers preventing disclosure of HIV status</b>	<b>Total (n)</b>	<b>Total (percent)</b>
<b>1. Fear of stigmatization and discrimination</b>	8	32
<b>2. Shame and perceived negative outcome(s) of disclosure</b>	7	28
<b>3. Negative Perception about HIV/AIDS among the public</b>	6	24
<b>4. Lack of Psychosocial support systems</b>	4	16
<b>Total</b>	<b>25</b>	<b>100</b>

Source: Field Survey, 2013.

### 4.3.1 Fear of Stigmatization and Discrimination

By far, stigmatization and discrimination is one of the challenges militating against PLWHA disclosing their status to their families, friends and people within their communities globally (UNAIDS Report, 2005).

Table 11 showed that 32 percent had not disclosed their status due to the fear of stigmatization and discrimination. About (75%) gave various reasons and perceived outcomes they risked should they disclose their status. Stigmatization in the form of verbal abuse, name calling, neglect and physical abuse were common forms of stigma that these respondents dreaded or risked facing from their family members and friends once they disclosed their status. The quotations expressed below showed some of the respondents' sentiments:

*The initial awareness and information given about HIV/AIDS; particularly on its mode of transmission, symptoms and causes created a very negative perception of the disease making it difficult to disclose my status to anyone. I fear I will be rejected by my family. (34 year old female respondent)*

*I don't want anyone to know of my status so as to discriminate against me: I already sense people judging and pointing fingers at me. (30 year old male respondent)*

*I cannot disclose to my husband because he would not keep it to himself but will instead spread the news of my infection leading to people discriminating and stigmatizing against me. (29 year old female respondent)*

These views and findings were consistent with other research findings by Lévy *et al.*, (1999) and Melude, (2007) which highlighted some reasons given by PLWHA for not disclosing their HIV status. Some of the reasons included fear of rejection and abuse by friends and family members. Some siblings could also withdraw from the PLWHA, putting them to shame while the PLWHA may be expecting maximum support from the people closest to him/her and wanting to know that they are not alone.

### 4.3.2 Shame and Perceived Negative Reaction from Person (s) Disclosed to

Table 11 showed that (28%) of respondents who have not disclosed their status stated that, shame and perceived negative reaction from family members made it difficult for them to disclose their status. The quotations expressed below showed some of the respondents' sentiments:

*I cannot bring myself to disclosing my status to anyone, due to how ashamed I am of my condition. I fear the possible negative reaction from my family and loved ones should I disclose that I am HIV positive. (25 year old female respondent)*

*I do not know how to break news of my HIV infection to my family and friends; and how they will take it. (45 year old male respondent)*

*It will be disgraceful to tell others about my HIV positive condition; how would society treat me (22 year old male respondent)*

*It is disgraceful to have this disease in the first place; disclosing it to others will be even more distasteful. (30 year old female respondent)*

*It could strain my relationship with family and friends; degenerating into me being ostracized and turned into a laughing stock for society. (33 year old male respondent)*

Such findings were seen to be similar with other studies such as; Klitzman *et al.*, (2004); Peretti-Wattel *et al.*, (2006) and McGregor, (2007) which discovered that barriers preventing status disclosure by PLWHA included the fact that, people were ashamed to be seen attending health facilities that are said to treat HIV and HIV related symptoms.

### 4.3.3 Negative Perception about HIV/AIDS among the General Public

Table 11 showed that (24%) of respondents felt that public opinion on HIV/AIDS since its emergence had been negatively skewed. Resulting from this, anyone suspected of HIV/AIDS infection was immediately blacklisted and discriminated against. The quotations below showed some of the respondents' sentiments:

*The jury on HIV/AIDS is so negatively skewed within the public domain that disclosing my HIV positive status would make me a public ridicule and object of discrimination. I cannot afford to disclose my status to anyone. (40 year old male respondent)*

*The negative social perception about HIV/AIDS makes it dangerous to disclose one's status; I prefer to take my medication religiously, avoid risk to my family members and keep my condition to myself. (31 year old female respondent)*

HIV/AIDS has mostly been associated with individuals who are promiscuous and seen as a kind of retribution for the sexually amoral in society. This earlier perception greatly shaped the views and perception of society towards PLWHA. Over the years, as intimated by the pharmacist in charge of dispensing HIV medication at the Nsawam Government hospital, the opinion on HIV/AIDS had been so skewed that the unit has a separate outfit that serves only PLWHA. PLWHA are attended to differently and served their medication in a private room within the pharmacy. Responses given by PLWHA coming for their medication indicated that, most respondents seem to prefer this approach as it was more private and confidential.

According to Paxton (2002), people dislike being labeled and tagged as PLWHA because they are largely suspected to be promiscuous. This is usually the case for individuals that did not get infected through sexual intercourse. For such individuals non-disclosure is the preferred option and the way to go. This finding of negative perception about HIV/AIDS is similar to one found in a study conducted by Mills *et al.*, (2006) in both developing and developed countries, where it was found that in both the developed and developing countries, fear of disclosure was one of the factors that impeded compliance to ART. As a result of this fear of disclosure, PLWHA avoided taking their medication in public places and this resulted in PLWHA missing doses.

Mills *et al.*, (2006) also found that, the HIV clinic being separate from the main hospital seemed reassuring to PLWHA. This, in essence, shows that PLWHA go to great lengths to avoid been seen taking their medication by others. Due to the negative public perception about HIV/AIDS, PLWHA decide to keep their positive status hidden from family, friends and society in general.

#### 4.3.4 Lack of Psychosocial Support Systems

Table 11 above shows that 16 percent of respondents who had not disclosed their status gave the lack of psychosocial support system as a barrier preventing them from disclosing their status to their family and others. The quotations expressed below showed some of the respondents' sentiments:

*I do not have anyone to keep this secret of mine and support me in with my treatment process. (35 year old female Respondent)*

*I have not disclosed my status because instead of support, my husband will shun and broadcast my infection to our family members. (33 year old female Respondent)*

These views by respondents suggested that PLWHA recognized the need for some level of support in their treatment process but the person (s) must be one to be trusted.

A similar study by Nischal *et al.*, (2005), amongst an Indian population concluded that stigmatization and expensive ART regimens make social, emotional and financial support from the family and society critical. The study concluded that disclosure of HIV status is a prerequisite for family and social support. People are required to support PLWHA on ART but could only do so if the HIV status of the person to be supported is known.

PLWHA who have disclosed their status might be able to access more social support and therefore have improved compliance to medication. PLWHA with extensive family support will have better compliance to ART treatment compared to PLWHA who have little or no family support. The support could include financial assistance, where family members can assist in paying for the PLWHA medical supply. In related studies by Horne (2001) and Mannheimer *et al.*, (2005) it was found that the support after disclosing one's status could be in improving compliance to treatment and care; where family members can remind PLWHA of when to take their medication and serve as their treatment supporters.

#### **4.4 Views about Status Disclosure**

One of the present study's specific objectives is the perceived importance of status disclosure from three different perspectives- disclosing one's status to their family, friends and the general public. Using a multiple reasons question format, respondents were asked questions on their opinions on disclosing one's status to others.

##### **4.4.1 Status Disclosure to Family Members**

Respondents' opinions on disclosure of HIV positive status to family members are presented in Table 12. About 40 percent of the respondents who had disclosed their status felt it was important to disclose one's status to family members such as one's spouse to prevent infection through sexual intercourse. About 66 percent felt it was necessary to disclose one's status to avoid spreading the disease to one's family members through sharing personal items such as blades,

needles, toothbrushes, etc. Twenty-two percent of respondents felt it was obligatory to disclose one's positive status to one's family members.

For those who had not disclosed their status, 80 percent of respondents stated that they had not disclosed their status because they felt one's HIV status was a personal matter and must be left to one to decide whether or not to disclose their status to their family members. Another 40 percent of those who had not disclosed their status also stated that one should not disclose one's status to avoid discrimination and the stigmatization often shown to HIV-infected individuals.

*Disclosure is a serious thing my brother, for me to tell my family about my HIV positive will be suicide- it will be better if I take some pills and die in peace instead. (40 year old male respondent)*

The above view expressed the sentiment of one of the respondents when asked what his opinion about disclosure of one's HIV status to his family members and others. According to related studies by Black and Miles (2002) and Stirratt (2005), the expectation or experience of HIV-related stigmatization and victimization causes many HIV positive individuals to perceive the matter of HIV status disclosure as a significant and recurrent dilemma in their lives.

**Table 12: Views about Status Disclosure to Family Members**

<b>For those who had disclosed their HIV status</b>	<b>Frequency</b>	<b>Percent</b>
Disclose so as to prevent infection and spread of disease	23	39.7
Disclose because it is obligatory to disclose one's status to family members	13	22.4
Disclosed because it is important to avoid risk to family members	38	65.5

<b>For those who had not disclosed their status</b>	<b>Frequency</b>	<b>Percent</b>
Not to disclose because it is a personal matter and must be left to the individual	20	80
Not to disclose to avoid stigma and discrimination	10	40

Source: Field Survey, 2013

#### **4.4.2 Views about Status Disclosure to Friends**

Table 13 presents the views of respondents about disclosing one's HIV status to friends. About 76 percent of those who had disclosed their status stated that disclosing one's status to friends was necessary to avoid risk and prevent infection or spreading the disease to them through sharing personal items such as blades, needles, pins, etc. About 7 percent of them felt it was obligatory to disclose one's status to friends.

For those who had not disclosed their status, Table 13 showed that over 90 percent of them stated that HIV status was a personal matter and must be left to one to decide when and who they choose

to disclose to. Forty-eight (48) percent of them indicated that one should not disclose one's status to friends in order to avoid stigmatization and discrimination from friends.

**Table 13: Views about Status Disclosure to Friends**

<b>For those who had disclosed their status</b>	<b>Frequency</b>	<b>Percent</b>
Disclose so as to prevent infection and spread of disease	9	15.5
Disclose because it is obligatory to disclose one's status	4	6.9
Disclose because it is important to avoid risk to friends	35	60.3
<b>For those who had not disclosed their status</b>	<b>Frequency</b>	<b>Percent</b>
Not to disclose because it is a personal matter and must be left to the individual	23	92
Not to disclose to avoid stigma and discrimination	12	48

Source: Field Survey, 2013

#### **4.4.3 Views about Status Disclosure to the General Public**

Respondents' opinion on disclosure of HIV positive status to the general public are presented in Table 14. Almost 30 percent of those who had disclosed their status stated that one should disclose one's status to prevent infection and spread of the disease. They stated that through sharing personal items such as blades, needles and sharp objects one could infect others and so one should disclose their HIV status the general public.

For those who had not disclosed their status, Table 14 showed that 52 percent of them felt it was not compulsory to inform everyone about one's infection. Eighty-four (84) percent of them stated that one's status was a private matter and should not be discussed with the general public.

**Table 14: Views about Status Disclosure to the General Public**

<b>For those who have disclosed their HIV status</b>	<b>Frequency</b>	<b>Percent</b>
Disclose so as to prevent infection and spread of disease	17	29.3
<b>For those who have not disclosed their status</b>	<b>Frequency</b>	<b>Percent</b>
Not to disclose because it is not compulsory to inform everyone	13	52
Not to disclose because it is a private matter and should not be discussed with the general public	21	84

**Source: Field Survey, 2013**

Views given by respondents on HIV status disclosure in the current study were similar to findings of a study by Deribe et al., (2005) on the determinants and outcomes of disclosing HIV-positive status to sexual partners among women in Southwest Ethiopia. The study found that 69 percent of women reported that they had shared their HIV test results with their partners. Some reasons given by respondents for disclosing their status included: to avoid spreading disease to family members and a sense of obligation to disclose to their family members. Among the women who did not disclose their HIV status 62.5 percent said that it was due to fear of partner's reaction (fear of stigmatization, rejection and accusation of infidelity).

The finding of the Southwest Ethiopian study was also consistent with opinions of some respondents in the present study when asked about their perspectives on not disclosing one's

status to family members. About 60 percent of respondents in the present study stated that it was not important to disclose one's HIV status and cited reasons such as: one could become a victim of stigmatization and spousal rejection or abuse should their HIV status be shared with their family members. This perspective of status disclosure not being important is also supported in a qualitative study by Nachege et al., (2006) in Soweto, South Africa undertaken among PLWHA on ART and healthcare providers. It was found that PLWHA who had not disclosed their status did not do so because they feared the stigma associated with HIV/AIDS in their communities. They stated that considering the possible negative outcomes, it was not necessary to disclose their status.

Similarly, another study by Black and Miles (2002) indicated that many PLWHA conducted disclosure in a selective manner that seeks to balance perceived concerns regarding the realization of positive outcomes (e.g., accessing support, building trust) and the avoidance of negative consequences (e.g., experience of discrimination, stigmatization).

Chapter 5, details out a summary of key findings of the study and provides recommendations for policy consideration.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.0 Summary

The study sought to assess the relationship between status disclosure and ART medication compliance among PLWHA. The main objectives were to explore whether background characteristics affect disclosure of HIV status disclosure and compliance to medication, and whether status disclosure affects compliance to medication. The specific questions that were set out to be answered were:

1. Do socio-demographic factors determine status disclosure and compliance to medication?
2. Does disclosure of HIV/AIDS status lead to compliance with medication by PLWHA?
3. Are there barriers or factors preventing PLHWA from disclosing their status?
4. Do PLWHA perceive status disclosure as important?

The unit of analysis in the study was PLWHA on ART medication. A total of 83 PLWHA comprising of 66 females and 17 males on ART medication were used in the study. The analysis of data showed that 58 respondents had disclosed their HIV status while 25 respondents had not.

Relevant literature was reviewed on status disclosure and compliance to ART medication. A conceptual framework was developed and a methodology outlining techniques used to gather and analyze relevant information was also discussed.

Descriptive statistics was used in the summarization of data. Bi-variate analytical methods were also employed to explore background characteristics of respondents and their association(s) with status disclosure and compliance to medication.

### **Relationship between Status disclosure and Medication compliance**

The analysis of data showed that 58 respondents representing 69 percent had disclosed their status. The study's findings revealed a significant relationship between disclosure of one's HIV status and medication compliance. The relationship between the two variables was found to be positive. It was found that if a PLWHA disclosed his/her status, he/she was more likely to comply to medication than one who had not disclosed his/her sero-positive status.

Additionally, an assessment of the practical implications of the relationship between status disclosure and compliance to medication found that about 85 percent of respondents who had disclosed their status had seen an improvement in their medication use after disclosing their HIV status.

### **Barriers Preventing Disclosure of Status**

The analysis of data showed that 30 percent of the total number of respondents had not disclosed their HIV status. They were each asked to give one main barrier or reason for which they had not disclosed their status to anyone. Respondents revealed four major reasons or barriers preventing them from disclosing their status. They were: Fear of Stigmatization, Perceived negative outcome(s), Negative perception about HIV/AIDS among the public and Lack of Psychological Support Systems.

## **Respondents' Views on Importance of Status disclosure**

The study assessed all respondents' perceptions on the importance of status disclosure to their family members, friends and the general public. For respondents who had disclosed their HIV status to family members, family obligations and the need to prevent family members from being infected were identified as the main reasons why one should disclose one's status. For those who had not disclosed their status their main perception was that one's HIV status was personal and should be left to the individual. They also felt there was the need to avoid stigmatization and discrimination.

On disclosing of HIV positive status to friends, respondents who had disclosed their status felt it was important to disclose status to avoid risk to friends. Conversely, respondents who had not disclosed their status felt there was no need to tell their friends because it was a personal matter.

Respondents' opinion on disclosing their HIV status to the general public revealed that for those who had disclosed their status, the need to prevent infection and spread of disease was the main reason for one to disclose one's status. Conversely, for those who had not disclosed their status, reasons of privacy and non-compulsion informed the perception that one did not need to disclose one's status to the general public.

## **5.2 Conclusion**

HIV/AIDS continues to be a major health issue affecting the lives of many Ghanaians especially those within the productive workforce. Antiretroviral medication provides some optimism in the effort to stem the tide of the HIV/AIDS epidemic. However, for the ART medication to work

effectively in prolonging the survival of PLWHA and preventing the spread of the disease, compliance to the ART medication must be optimal.

The current study set was guided by a framework that postulated that, PLWHA who after receiving HIV counseling and disclose their status to others, would benefit from access to social support resulting in optimal compliance to medication. Conversely, PLWHA's who after receiving HIV counseling do not disclose their status to others would lack access to social support resulting in poor compliance to medication. Based on the findings of this study, PLWHA who disclose their status are more likely to have optimal compliance to medication than those who do not.

The missing link which this study could not establish was access to social support; which was postulated to facilitate compliance to medication. Therefore, a strong conclusion could not be drawn that those who had disclosed their HIV status had access to social support, which in turn led to optimal compliance to medication. It is suggested that subsequent studies could go further to assess whether or not access to social support by PLWHA leads to optimal or poor compliance to medication.

### 5.3 Recommendations

Following the findings and conclusions made from the study, the following recommendations may be of help in efforts towards addressing challenges facing ART medication compliance by PLWHA.

1. It was revealed in the study that majority of PLWHA who have not disclosed their HIV status chose not to disclose because they believe there is still widespread stigmatization and discrimination of PLWHA. There must be an all-out campaign by government and stakeholders to engage particularly the electronic media to sensitize the people of the Municipality on HIV/AIDS and advocate the concerns of PLWHA. Community health workers, faith-based organizations and cultural institutions can also greatly facilitate HIV/AIDS education and reorientation process within communities.

2. PLWHA, especially those struggling with compliance to both treatment and medication should be educated on the need to bring at least one person of trust as a treatment supporter before the initiation of ART medication. This can be achieved by improving communication strategies of health workers in the Municipality. Through comprehensive health education of the PLWHA at their own pace, the PLWHA must be convinced of the relevance of having a support system that will assist in the treatment process. Again, the healthcare worker has to lay emphasis on the importance of a treatment supporter while addressing PLWHAs' possible concerns regarding disclosure.

3. Non-Governmental Organisations (NGOs) and other stakeholders in the Municipality need to strengthen structures and platforms for educating and supporting initiatives geared towards promoting the welfare of PLWHA.

Such bodies and agencies, which are constantly advocating and educating the public through seminars and programmes on HIV/AIDS can help erode some of the misconceptions and myths surrounding HIV/AIDS. This may allow for more openness on HIV/AIDS discussions and encourage many PLWHA to disclose their status and be accepted and supported by society.

4. PLWHA in the Municipality should be encouraged to participate and be more involved in efforts and initiatives geared towards sensitizing the public on HIV/AIDS. By engaging PLWHA in efforts that promote HIV/AIDS campaign messages, the focus can be shifted from faceless institutions and stakeholders advocating for a cause to PLWHA creating awareness about their plight by telling their own story.

5. Nationally, there must be stricter enforcement of laws regarding discrimination and stigmatization of people living with HIV/ AIDS. Stigmatization and discrimination can truly be stamped out when there is governmental and institutional commitment to flush out stigmatization and discrimination as seen in countries such as Uganda and Ghana. In clear cases of stigmatization such as, termination of one's employment due to their HIV status or openly disclosing one's HIV status without their consent or permission- which are both offences under the laws of Ghana.

6. There must be strict enforcement of the law and provisions addressing infractions committed against PLWHA (Article 17, 18- Ghana Constitution 1992). With such legal precedents being set as an example to deter others from actions that constitute stigmatization and discrimination, society will begin to gradually recognize the need to treat and respect the rights of PLWHA. Currently, policies that affect HIV and AIDS exist. The difficulty however is that policies are administrative measures which do not wield the same level of compulsion as laws (Mills 2004).

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## APPENDIX

### 1.1 Questionnaire

Dear Respondent

This questionnaire forms part of a research on assessment of Status Disclosure on the Medication Compliance among People Living with HIV/ AIDS (PLWHA) at the Nsawam Government Hospital. Your responses should provide lessons that can help improve services delivered in health facilities. Your identities and responses are going to be guarded with the highest level of confidentiality.

Thank you for your cooperation

**Instruction: Please answer each question with a tick or as appropriate**

#### SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. Sex of respondent?

a. Male

b. Female

2. How old are you?

.....

3. What is your religious affiliation?

a. Christianity

c. Islam

d. Traditional

e. Other (specify).....

4. What is your highest level of education?

- a. Primary School
- b. Junior High School
- c. Senior High School
- d. Diploma or Certificate
- e. First Degree
- f. No education
- g. Other (specify).....

5. What is your primary occupation (what kind of work do you mainly do)?

- a. Professional (Teacher, Nurse, Lecturer, etc.)
- b. Trader
- c. Artisan
- d. Public Servant
- e. Civil servant
- f. Other (specify).....

6. What is your marital status?

- a. Single  → skip to Section B
- b. Married
- d. Divorced
- e. Widowed
- f. Other (specify).....

7. What is the highest level of education attained by your partner?

- a. Primary
- b. Junior High School [ ]
- c. Senior High School [ ]
- d. Diploma or Certificate [ ]
- e. First Degree [ ]
- f. No education [ ]
- g. Other (specify).....

8. What is your partner's main occupation?

- a. Professional (Teacher, Lecturer, Artisan, etc.) [ ]
- b. Trader [ ]
- c. Artisan [ ]
- d. Public Servant [ ]
- e. Civil Servant [ ]
- f. Other (specify).....

## **SECTION B: ASSESSMENT OF HIV/AIDS STATUS DISCLOSURE AMONG PLWHA**

1. How long have you been living with HIV/AIDS?

- a. Less than 1 year [ ]
- b. 1- 3 years [ ]
- c. 3- 5 years [ ]
- d. More than 5 years [ ]

2. Have you disclosed your positive HIV/AIDS sero-status to anyone since your diagnosis?

a. Yes [ ]

b. No [ ]

3. When did you disclose your positive sero- status? (Skip to question 13, if HIV status is undisclosed)

a. Immediately after knowing [ ]

b. Within 1 month [ ]

c. Between 1- 2 months [ ]

d. Between 2- 3 months [ ]

e. After 3 months- 1 year [ ]

4. Who did you disclose your HIV status to?

.....  
.....  
.....

5. Why did you choose to disclose your status to this person?

.....  
.....  
.....  
.....

6. What was the person's immediate reaction to your disclosing your positive sero- status?

.....  
.....  
.....  
.....

8. Has your disclosing your status affected your relationship with this person?

a. Yes [ ]

b. No [ ]

c. Don't Know [ ]

9. Does the person you disclosed your HIV status to support you in your treatment process?

a. Yes [ ]

b. No [ ]

What form of support do you gain from this person?

.....  
.....  
.....  
.....  
.....

10. Have you disclosed your positive HIV/AIDS sero- status to any other person(s)?

a. Yes [ ]

b. No [ ]

11. Who is or are these person(s) you disclosed your status to and why?

.....  
.....  
.....  
.....  
.....

12. How did your disclosure of your HIV/AIDS positive status affect your relationship with them?

a. Avoided me/ refused to talk to me [  ]

b. Abandoned me [  ]

c. Subject me to physical abuse [  ]

d. Other

(specify).....

.....

13. Are there particular barriers preventing you from disclosing your HIV status to others? (For PLWHA who have not disclosed)

a. Yes [  ]

b. No [  ]

What are some of these barriers preventing you from disclosing your status to others?  
(For PLWHA who have not disclosed)

.....

.....

.....

.....

.....

14. Do you think status non- disclosure helps in the spread of the disease? (For both PLWHA's who have disclosed and those who have not disclosed)

a. Yes [  ]

b. No [  ]

If yes, how is status disclosure relevant in the treatment process?

.....

.....

.....

.....

15. Has your medication use been affected after you disclosed your status?  
(For disclosed PLWHA)

a. Yes [ ]

b. No [ ]

If yes, how has your medication use been affected?

a. Medication use has improved [ ]

b. Medication use has deteriorated [ ]

16. Would you encourage other PLWHA to disclose their status? (For disclosed PLWHA)

a. Yes [ ]

b. No [ ]

17. What is your opinion about disclosure of positive HIV/AIDS sero- status to your family?

Please tick as many as possible: (For both disclosed and Undisclosed PLWHA)

a. It is important to disclose to prevent re-infection and spread of the pandemic [ ]

b. It is obligatory to disclose one's positive sero- status [ ]

c. It is a personal matter and must be left to the individual [ ]

d. It is important to avoid risk to family members [ ]

e. Other

(specify).....  
.....  
.....

18. What is your opinion about disclosure of positive HIV/AIDS sero- status to your friends?

Please tick as many as possible: (For both disclosed and Undisclosed PLWHA)

a. It is important to disclose to prevent re-infection and spread of the pandemic [ ]

b. It is obligatory to disclose one's positive sero- status [ ]

c. It is a personal matter and must be left to the individual [ ]

d. It is important to avoid risk to friends [ ]

e. Other

(specify).....

.....

.....

19. What is your opinion about disclosure of positive HIV/AIDS sero- status to the general public?

Please tick as many as possible: (For both disclosed and Undisclosed PLWHA)

a. It is not compulsory to inform everyone [ ]

b. It is a private matter and should not be discussed with others [ ]

d. The public should know to prevent further spread of the disease [ ]

e. Other

(specify).....

.....

.....