

**BARRIERS TO DISCLOSURE OF HIV POSITIVE STATUS TO SEXUAL
PARTNER(S) IN THE CENTRAL REGION, GHANA.**

BY

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DECLARATION

I hereby declare that, except for other people's works, which have been duly acknowledged, this work is the result of my own research. This thesis, either in whole or in part has not been presented elsewhere for another degree. I am therefore responsible for the views expressed in this content.

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Sign

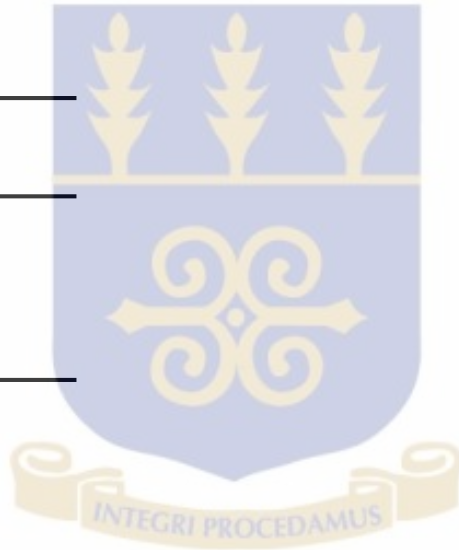
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ABSTRACT

Background: It is estimated that 224,488 persons made up of 189,931 adults and 34,557 children (15%) are living with the Human Immunodeficiency Virus (HIV) in Ghana (Ghana AIDS Commission, 2013). Disclosure to sexual partner (s) is one of the key strategies in HIV prevention as it may promote safer sex practices, prevents new infections to partner (s), reduces the risk of mother-to child transmission, increases social support and reduces depression. Studies in Africa on HIV status disclosure have documented varying low rates among countries. People Living with HIV/AIDS (PLWHA) have difficulties in disclosing their HIV status to others for fear of negative consequences. HIV status disclosure has far reaching implications on the future course of the disease. In Ghana there is limited data on HIV status disclosure and the barriers to HIV status disclosure among sexual partners remain unclear.

Objective: To determine the prevalence of and barriers to HIV status disclosure to a regular sexual partner among HIV positive clients attending Antiretroviral Clinics in the Central Region.

Materials and Methods: This was a cross-sectional study. A structured, pre-tested questionnaire was administered to consenting HIV positive adults in 7 randomly selected treatment sites. Frequencies, proportions and Odds Ratios were calculated with STATA SE 13.

Results: A total of 461 HIV positive clients were recruited. Most (65.5%, n=302) respondents were females. The mean age of the respondents was 33.9 (± 7.4) years.

Most respondents were aged between 20-35 (35.6%, n=164,) years. The overall prevalence of disclosure to a sexual partner was 41.2 % (n=190). The prevalence and odds of disclosure were greater in males (44%, n=70). The main determinants of HIV status disclosure include age 20-35 (AOR: 5.49; 95% CI, 1.87-16.14), knowing a partner's status (AOR: 6.89; 95% CI, 2.81-16.88), knowing the relevance of disclosure (AOR: 227.0; 95% CI, 46.13-1116.9), and having a treatment adherence monitor (AOR: 17.25; 95% CI, 6.30-47.21). Fear of a negative outcome of disclosure such as divorce or blame were major barriers to disclosure.

Conclusion: The rate of HIV positive status disclosure among sexual partners in the seven (7) study sites in the Central Region of Ghana is 41.2%.

Recommendation: Special emphasis should be placed on disclosure counselling after receiving HIV positive result. This should be an effective, on-going practice which should result in behavioural change towards disclosure. Also advocacy needs to be scaled up to increase condom use.

DEDICATION

I dedicate this work to Dorinda my wife and our pretty angels, Kimberly and Kalista.



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LIST OF ABBREVIATIONS

AIDS	–	Acquired Immunodeficiency Syndrome
ART	–	Antiretroviral Therapy
CHAG	–	Christian Health Association of Ghana
CHPS	–	Community-Based Health and Planning Services
DHS	–	Demographic and Health Survey
HIV	–	Human Immunodeficiency Virus
HTC	–	HIV Testing and Counselling
MSM	–	Men Who Sleep with Men
NACP	–	National AIDS Control Programme
OACHA	–	Ontario Advisory Committee on HIV/AIDS
PLWHA	–	People Living with HIV and AIDS
PMTCT	–	Prevention of Mother-to-Child Transmission
SSA	–	Sub Saharan Africa
UCC	–	University of Cape Coast
UNAIDS	–	Joint United Nations Programme on HIV/AIDS
VCT	–	Voluntary Counselling and Testing
WHO	–	World Health Organization

DEFINITION OF TERMS

HIV-Positive Status

HIV-positive status is defined as infection with the human immunodeficiency virus (HIV), as determined by a screening Elisa assay and a confirmatory Western Blot assay identifying the presence of antibodies to HIV (OACHA, 2003).

Disclosure

In the context of this study, disclosure is the act of an HIV positive person informing his/her partner or spouse, and other people of the HIV-positive status. That is, the act of disclosure is done by the HIV positive client himself/herself; primary or self-disclosure.

Sexual Partner

Sexual partners are people who engage in sexual activity together. These partners could be of any number, sex, gender, or sexual orientation. The sexual partners may be in a committed relationship, either on an exclusive basis or not, or engage in the sexual activity on a casual basis.

Treatment Adherence Monitor

This is an individual chosen by an HIV positive client to monitor his/her adherence to HIV treatment and care. Treatment adherence monitors are chosen by HIV positive clients based on their perceived level of trust and ability to maintain confidentiality. A treatment adherence monitor may be a sexual partner, family or other social relation.

CHAPTER ONE

INTRODUCTION

1.1. Background to the Study

Infection with the Human Immunodeficiency Virus (HIV) is a pandemic accounting for the death of almost 30 million people annually. It is acquired mostly through heterosexual or MSM transmission or intravenous drug use (WHO, 2009). The most common mode of transmission is through sexual contact worldwide, accounting for 71% of all HIV transmissions. An estimated 0.8% adults aged 15-49 years are living with the disease worldwide. The burden of the epidemic continues to vary considerably between countries and regions. Sub Saharan Africa however remains the most severely affected region, with nearly 1 in every 20 adults (4.9%) living with HIV and accounting for 69% of the people living with HIV worldwide (UNAIDS, 2012).

In Ghana, the epidemic continues to be generalized, with a 2014 prevalence of 1.3% in the general population and 1.1% in the Central Region. According to a 2014 National AIDS Control Programme report, HIV prevalence declined from 1.5% in 2010 to 1.3% in 2014 with significant variations across regions, ranging from 0.8% to 3.7%. HIV prevalence is highest in the Eastern Region and lowest in the three northern regions of the country. HIV prevalence is generally higher in urban areas, in mining and border towns, and along main transportation routes. The Ghana National AIDS Commission estimates HIV prevalence to be highest between ages 45 to 49 years (3.3%) and lowest between ages 15 to 19 years (0.8%). The infection peaks at 35–39 years for women and 40–45 years for men. Infection levels are highest in middle income and middle educational groups, with the poor and unemployed less affected (NACP, 2014).

In sub-Saharan Africa (SSA), HIV discordant partners represent the majority of HIV- infected couples and a large proportion of new HIV infections in this region occur among discordant couples in long-term stable partnerships (Fishel et.al., 2011). A study on HIV discordance among couples in Mozambique estimated that 1 in 10 couples was discordant (Fishel et.al., 2011). HIV status disclosure between sexual partners is therefore particularly relevant for the spread of HIV/AIDS in SSA. As HIV becomes more of a chronic disease and people living with HIV/AIDS (PLWHA) live longer, disclosure of HIV status is considered essential for prevention, care, treatment, and support of people living with HIV (Mlambo et.al., 2011).

Disclosure is an important public health goal for a number of different reasons. First, disclosure may motivate sexual partners to seek testing, change behaviour and ultimately decrease transmission of HIV. In addition, disclosure may facilitate other health behaviours that may improve the management of HIV. For example, women who disclose their status to partners may be more likely to participate in programmes for prevention of HIV transmission to their infants. Through disclosure of her status, a woman may receive support from her family or others in her social network and may also be able to access available support services. By adequately addressing the emotional, social, and practical sequelae of her positive status she may be more willing to adopt and maintain health behaviours such as early cessation of breastfeeding and adherence to treatment regimens.

Beyond its role in protecting sexual partners from HIV transmission, HIV status disclosure to family members, loved ones and members of one's social network can also

have several positive consequences for PLWHA. Benefits of disclosure include receipt of social support, a feeling of relief and improved mood state, lower likelihood of depression, increased self-esteem, improved physical and mental health, ability to openly seek HIV treatment, better engagement and retention in HIV care, and increased treatment adherence (Woodward et.al., 2012; Oberyemer et al.,2011).

Disclosure is a very sensitive phenomenon and is often very challenging for PLWHA (Serovich et.al., 2011). It has been recognized, however, that there are a number of barriers that confront HIV-infected individuals when sharing their test results with friends, family and, most importantly, their sexual partners. In deciding whether or not to disclose their HIV positive status, PLWHA often take into account the effect of the disclosure not just on themselves, but also on the people to whom they disclose (McKay et.al., 2011). HIV sero-status disclosure decisions are often influenced by various cognitive, cultural, and contextual factors (Nachega et al., 2012; Bird et.al., 2011), especially by HIV-related stigma. HIV positive status disclosure can be met with negative reactions such as rejection, verbal abuse, violence or other threatening behaviour, as well as stigma- induced responses from members of the PLWHA's social network, potential sex partners, family and friends (Oberyemer et al., 2011).

Therefore, PLWHA often weigh the pros and cons of disclosure, and are more likely to disclose their sero-status when they perceive that the positive consequences of disclosure outweigh the negative ones (McKay et.al., 2011). Understanding the reasons for disclosure and non-disclosure and how these reasons may differ depending on the recipient of disclosure may be essential for tailoring intervention strategies. This necessitates an understanding of the magnitude of HIV status disclosure and associated factors among people living with HIV/AIDS who have been enrolled into care.

In some jurisdictions such as Iceland, Finland, Malawi and Singapore, it is compulsory by law for an infected patient to disclose to his or her partner, whereas in Ghana, Bangladesh, Denmark, Norway and

Tanzania, HIV sero-status disclosure is viewed as a purely personal matter.

HIV status disclosure is influenced by individual characteristics, fear of negative outcomes of disclosure, health status, prior counselling to undertake the HIV test, type of HIV care, or type of counselling available (Kadowa et.al., 2009; Makin et al., 2008). Individuals who fail to disclose their HIV status are less likely to change their sexual behaviour and practice safer sex than individuals who disclose (Pinkerton et al., 2009).

Previous studies on HIV status disclosure have provided evidence on low rates of disclosure. There is a big variance of disclosure rates across countries, and Ghana is no exemption. A study by Kadowa et al. (2009) reported that disclosure rates in developing countries after diagnosis ranged from 16.7% to 86%. The Central Region of Ghana is one of the socio-economically deprived regions in Ghana, with a high HIV prevalence rate. Therefore, there is a need to find out the disclosure rate in the Central Region, and the issues which hinder disclosure.

1.2. Statement of the Problem

In the Central Region of Ghana, there is no information on HIV/AIDS status disclosure among sexual partners. People diagnosed with HIV infection often face difficulties in telling others about their status. Little is also known about the issues which limit HIV status disclosure among regular sexual partner (s). This may hinder efforts at reducing HIV prevalence. It is therefore important to investigate the issues which limit HIV status disclosure in the region and suggest ways to enhance disclosure of HIV positive status among sexual partners as a key strategy to reduce transmission, especially among sero-discordant partners.

1.3. Conceptual Framework

Figure 1.1 below shows the conceptual framework for the study.

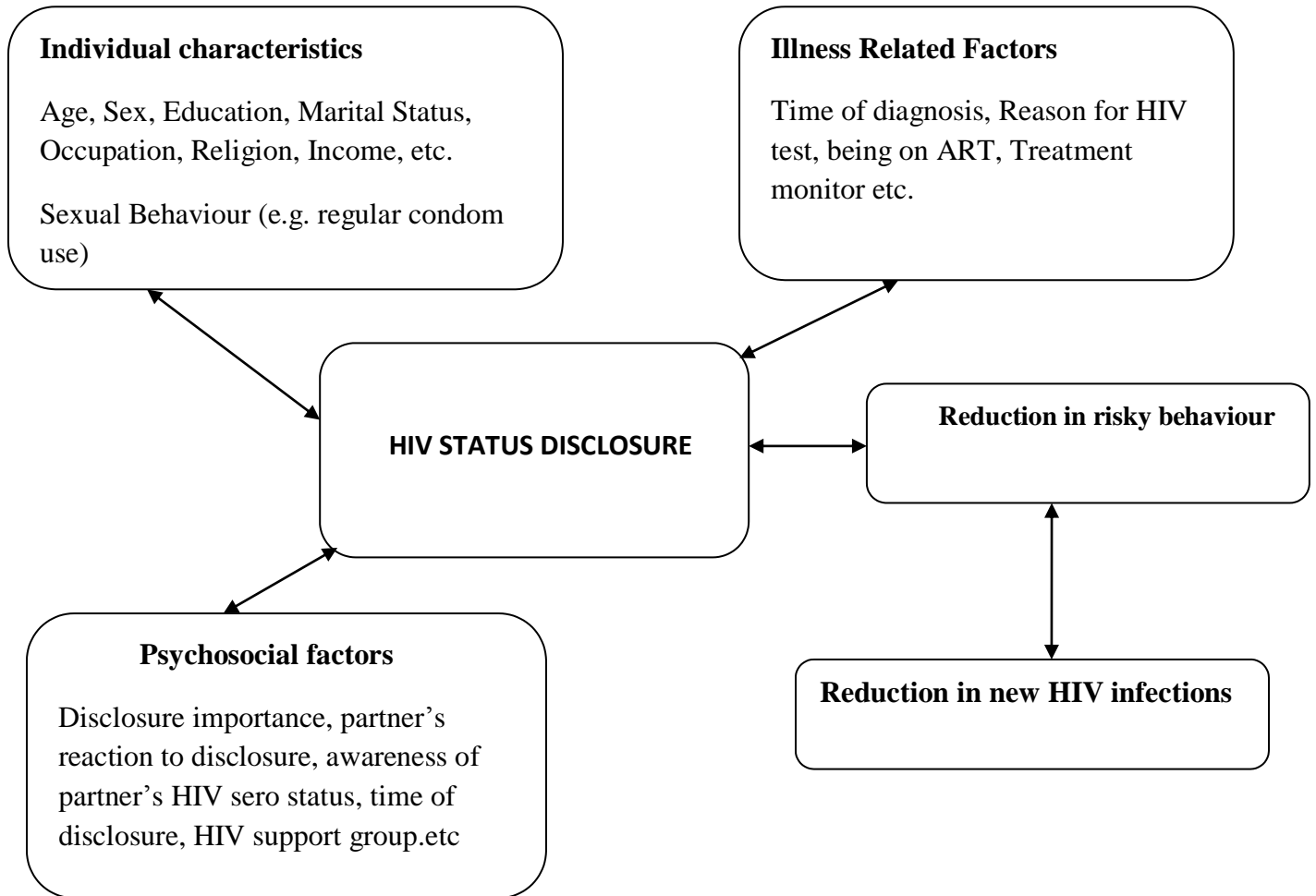


Figure 1.1: Conceptual Framework: Barriers to HIV Status Disclosure;

Source: Author's own construction (2015).

1.3.1. Explanation of Conceptual Framework

Several factors such as individual characteristics (age, educational status and sexual behaviour etc.) as well as psychosocial factors and illness related factors may act individually or interact variously to determine one's willingness to self disclose an HIV positive status to a sexual partner (s). HIV status disclosure may result in a reduction in risky behaviour which could reduce the incidence of HIV infection.

1.4. Justification for the Study

HIV status disclosure is of vital significance to HIV prevention. There is considerable interest in finding strategies to encourage disclosure because of the public health benefits that may accrue from the disclosure of HIV status to a sexual partner. Factors contributing to HIV status disclosure need to be understood to reduce the spread of HIV infection, promote access to care, enhance psycho-social support for patients from relatives and friends, reduce stigma, enhance adherence to treatment and promote safer health behaviour (Lugalla et al., 2011, Deribe et al., 2009). Globally, great efforts have been made to advocate HIV status disclosure as a key prevention strategy.

This study aimed to assess the magnitude of HIV status disclosure and the factors which influence disclosure among sexual partners who receive care at 7 selected antiretroviral treatment (ART) sites in the Central Region of Ghana. This study will contribute to filling the existing knowledge gap and suggest interventions for promoting disclosure among regular sexual partners and significant others.

This study also aimed at finding out the barriers to HIV positive status disclosure to regular sexual partner(s) among PLWHA in the Central Region of Ghana. The information collected will be useful in suggesting interventions that will increase the rate of disclosure and facilitate HIV prevention.

1.5. Research Questions

The study was guided by the following questions:

- a. What is the proportion of HIV positive persons who have not disclosed their status to sexual partners in the Central Region?
- b. What are the barriers to HIV positive status disclosure among sexual partners?
- c. What individual characteristics of HIV positive persons influence disclosure?
- d. What factors encourage HIV positive persons to disclose their status to sexual partner (s)?

1.6. General Objective

To determine the rate and factors influencing HIV positive status disclosure to sexual partner (s) in seven (7) Antiretroviral Clinic sites in the Central Region of Ghana.

1.7. Specific Objectives

Specifically, the study sought:

- a. To determine the proportion of HIV positive persons who have disclosed their status to their sexual partner(s) in the Central Region.
- b. To determine the barriers to HIV status disclosure among sexual partners.
- c. To determine the factors which encourage HIV positive persons to disclose their status to sexual partner(s) and significant others.
- d. To determine the differences in individual characteristics of HIV positive persons with regards to status disclosure.

CHAPTER TWO

LITERATURE REVIEW

2.1. HIV Status Disclosure

Disclosure is defined as the act of informing another person or persons of the HIV- positive status of an individual (OACHA, 2003). An act of disclosure may be done by the PLWHA him/herself or by another person, with or without the consent of the PLWHA. Disclosure could occur in many contexts. These include disclosure within personal relationships (to lovers, partners, spouses, children, friends and other family), disclosure in the workplace (to an employer, other employees, clients), disclosure to health and other service providers (physicians, emergency services, dentists, social workers, insurers), disclosure in an institutional setting (prisons, schools), and disclosure to the general public via the media (OACHA, 2003).

In a study by Brou et al. (2007) in Abidjan among women in a PMTCT programme, the rate of disclosure by HIV negative women to their sexual partners was as high as 96.7%, while only 46.2% of the HIV positive women disclosed their status to their sexual partners. This study also found that the most frequent time of disclosure was just before delivery, during early weaning and upon resumption of sexual activity. In Tanzania, a study by Lugalla et al. (2011) reported that 55% of married men showed their results to their wives while 34% of married women disclosed the information to their husbands. Women fear to disclose their status more than men; particularly those that are less educated or have low socio-economic status (Lugalla et al., 2011., Deribe et al., 2009). Another study undertaken in Dar es Salaam (Kilewo et al., 2001) reported that the rate of disclosure among sero-positive women who revealed their status to their sexual partners was only 16.7%.

The incidence of HIV/AIDS is worsened by the effect of nondisclosure of HIV status to sexual partners. Simbayi et al. (2006) found that 42% of participants in a study indicated that they had not disclosed their status to their sexual partners. In that study, non-disclosure was linked with a higher number of sexual partners. Available evidence suggests that individuals who delay disclosure or do not disclose their status continue to indulge in unsafe sexual attitudes and high risk drug-sharing behaviour (Eustace et al.,2010).

2.2. Barriers to HIV Status Disclosure to Sexual Partner

Studies on disclosure found that in an enabling environment, disclosure enhances emotional and social support. However, if the environment is not right, it may place the disclosing individual at an increased risk of physical violence and discrimination (Chaudoir et.al., 2011). Various factors influence disclosure of a positive HIV status to a sexual partner or a significant other. These include age, sex, relationship status, income level, religion, educational attainment and awareness of the partner's status. The common barriers to disclosure include fear of discrimination, stigmatisation, fear of blame, rejection and abuse and lack of understanding of the disease (Gaskins, 2006).

2.2.1. Discrimination of HIV Positive Individuals in Relation to Disclosure

Skinner et al. (2004) were concerned with the level of care people receive when they are unable to tell anyone of their positive HIV status. Goudge et.al (2009) also looked at the individual's ability to deal with being discriminated against as a way of increasing the

individual's willingness to disclose. Fear of discrimination reduces the willingness to disclose and this reduces the potentially important sources of support, such as family and friends (Skinner et al., 2004). It seems that in some countries, HIV is seen to be a woman's or prostitute's disease. This leads to avoidance of medical intervention due to the fear of being discriminated against. In Thailand, for example, the issue of discrimination has gotten to a point where termination of pregnancy rather than PMTCT is the preferred treatment option for HIV infected pregnant women (Türmen, 2003).

HIV status disclosure has negative consequences including stigma, discrimination, abandonment, rejection, divorce, physical violence, denied socio-economic support and accusation of infidelity (Lugalla et al., 2011; Kadowa et al., 2009; Wong et al., 2009).

2.2.2. Stigmatisation of HIV Positive Individuals in Relation to Disclosure

According to Akpa et.al (2010), stigma is identified as an important factor which impacts on the rapid transmission of HIV/AIDS. Adedimeji (2009) noted that the main reason for not disclosing is stigma and a fear of the outcome. Gaskin (2006) noted that because rural communities are more conservative, the issue of stigmatisation of HIV is amplified. According to Chaudoir et.al (2011), low levels of educational attainment and the generally low levels of economic empowerment, especially of women in developing economies contribute to the stigma of HIV. Stigma is a major detriment to disclosure.

2.2.3. The Fear of Blame, Rejection and Abuse in Relation to Disclosure

Simbayi et al. (2006) reported that individuals often attempt to hide their HIV positive status. This is due to previous negative responses. According to Wong et al. (2009), significant reasons for non-disclosure are a 'need for privacy', fear of losing a partner, and fear of

possible violence. Visser et.al. (2007) found that pregnant women were often reluctant to disclose to their sexual partners because they were financially and socially dependent on them. HIV positive status disclosure outcomes which result in violence are reported to be more common in sub-Saharan Africa; and it is women among sero-discordant couple who experience the highest rate of violence (WHO, 2004).

2.2.4. Time of Diagnosis of HIV Status in Relation to Disclosure

The ability to disclose one's HIV-positive status can be related to the degree to which an individual has accepted his or her HIV diagnosis. It is often most difficult to disclose soon after diagnosis, when a person is grappling with the initial impact of his or her HIV-positive status.

In their study, Deribe et.al. (2007) found that the time from diagnosis to disclosure varied from one day to two years. It was found that 73% of HIV positive adults disclose their status on the day of the results. However, that study was silent on the actual recipient of disclosure. Wong et al. (2009) suggest that 13% of clients never disclose to anyone and 36% do not disclose to their sexual partner. The average time of disclosure is 16 months. In their study, Visser et al. (2007) found that 59% of women disclose soon after diagnosis to a significant other.

2.2.5. Number of Sexual Partners, Condom Use and Disclosure

Individuals are less likely to disclose their HIV status if they have multiple sexual partners and more likely to engage in unprotected sex (Eustace et al., 2010). Pinkerton et al. (2009) identified that an increase in the use of condoms resulted predominantly after disclosure. The use of condoms reduces the transmission of the virus from 17.7% to 40.6%.

2.2.6. Awareness of Partner's Status and Disclosure

The rates of disclosure are influenced by awareness of the partner's status and in most studies it has been established that individuals are less likely to disclose if they are unaware of the partner's status. Knowledge of one's partner's status empowers an individual to make safe choices with regard to sexual behaviour such as abstinence and condom use (O'Brien et al., 2003). When an individual knows that the status of their partner is negative, the disclosure rate is low. Simbayi et al. (2006) found that 39% of respondents in their study were unaware of their partner's status. Unprotected sexual contact is most common when both individuals are oblivious of each other's status (Gari et al., 2010).

2.2.7. Relationship Status and Disclosure

Gari et al (2010) found that the relationship status of individuals influences their willingness to share or not share their HIV status. According to Chaudoir et al. (2011), disclosure rates are higher among long-term steady partners compared with couples in casual relationships. Disclosure is also influenced by the number of other sexual partners an individual has; the higher the number of sexual partners, the lower the rate of disclosure.

2.3. Factors which Encourage Disclosure

The reason (s) for disclosing differs depending on the recipient of disclosure. Chaudoir et.al. (2011) found that ethical responsibility and concern for partner's health was the major reason cited for disclosing to sexual partners, whereas seeking social support was the primary reason for disclosure to friends and family. Increasing social support was also mentioned as a major reason for disclosure to partners, family, friends and medical providers in the study. In addition to the social factors that may play a role in motivating individuals to disclose, some studies have reported the role that counselling may play in facilitating disclosure. Deribe et.al (2009) found that rates of disclosure increased with the number of times that a health professional discussed issues of disclosure at the HIV clinic where they received care. Men who received pre- and post-test counselling were nearly twice as likely to have disclosed to all sexual partners. In a qualitative study conducted at a voluntary counselling and testing clinic in Tanzania, Maman (2003) found that men and women mentioned the important role that counsellors played in their decision to disclose. Disclosure rates also depend on the stage of disease. Individuals who are ill are more likely to disclose than those who are asymptomatic (Gaskins, 2006).

2.4 Individual Differences and Disclosure

2.4.1. Age and Disclosure

According to O'Brien et al. (2003), persons between ages 22-35 years disclose most often to sexual partners or an immediate family member, while those older seem more willing to disclose to a friend. Women younger than 24 years of age are more likely to

disclose than those who are older and specifically they disclose to their sexual partners (Medley et.al., 2004).

The findings of a study done in Uganda by Kadowa et al. (2009) were however different. That study found that the mean age of those who disclosed were 38 years and 31 years for those who never disclosed. This may be due to associated factors, such as relationship status and the number of sexual partners in the previous two years (Kadowa et al., 2009).

2.4.2. Gender and Disclosure

Gender is a social construct and relates to roles and responsibilities of a male or female (Türmen, 2003). The financial and social status of women in many communities is lower due to the fact that they are women. A study in Nigeria noted that the rapid transmission of HIV included numerous aspects, one of which was the low status of women (Akpa et al., 2011).

In some societies it is not considered masculine to access health care services so men often access treatment later than women. Thus, men are often at an advanced stage of HIV infection and present with severe opportunistic infections (Greig et al., 2008).

2.4.3. Religion and Disclosure

According to Zou et al. (2008), there is a strong belief that HIV infection signals punishment by God. Out of about 400 congregants included in a study, 80.8% indicated that prayer could heal HIV. Although believers accept the power of prayer and the healing thereof, 93.7% still prefer the option of medical treatment. Zou et al. (2008) also found that religion and the perceived fear of stigmatisation are closely related. In Nigeria, Muslims are stigmatized more often if their partners die from AIDS (Akpa et al., 2011).

2.4.4. Educational Level and Disclosure

Individuals with a higher level of education are more likely to disclose than those with little or no education (Medley et al., 2004). However, other studies have noted that there is no significant difference in disclosure rates with regards to the level of education (Gari et al., 2010; Kadowa et al., 2009).

2.5. Interventions to Scale-Up HIV Status Disclosure Rates

Interventions for increasing the rates of disclosure of HIV have been suggested, with some of these interventions being implemented in different parts of the world. Increasing the effectiveness of HIV counselling of HIV positive persons is one of them (Makin et al., 2008). Pinkerton et al. (2007) suggested that support programmes to increase disclosure rates should advocate the use of condoms. Adedimeji et al. (2009) suggested that more effort should be focused on the service provider to assist clients with managing and counselling techniques in a setting where stigmatisation may be more prevalent due to the lower incidence of HIV.

Voluntary HIV testing and counselling (VCT) programmes should include providing support and advice on the disclosure process. Disclosure provides an awareness of the risk of contracting HIV and leads to increased VCT of the untested sexual partner (Kadowa et al., 2009).

A recommendation made by Greig et al. (2008) is 'to encourage as many men as women to get tested for HIV and ensure that gender issues are addressed in all VCT programmes. Medley et al. (2004) emphasized that more time should be allocated for counselling on disclosure in all HIV testing and counselling programmes. The World Health

Organisation (WHO, 2004), emphasizes that partners should be encouraged to be counselled and tested together, as this will promote disclosure. The use of role play is also suggested to allow individuals to broaden their own ability to disclose to their sexual partner.

CHAPTER THREE

METHODOLOGY

3.1. Study Design

This study was a cross-sectional study.

3.2. Profile of the Study Area

The study was conducted in seven (7) selected ART sites between 22nd February and 11th May, 2015 in the Central Region of Ghana. These were the Winneba Municipal Hospital, Saltpond Government Hospital, St. Luke's Catholic Hospital (Apam), Swedru Government Hospital, Cape Coast Metropolitan Hospital, UCC Hospital and the Twifo Praso Government Hospital.

The Winneba Municipal Hospital has 1053 HIV positive clients. The facility is located in the Effutu municipality which is situated between latitudes 5° 20' N and longitudes 0° 25' W and 0° 37' W on the eastern part of the Central Region Ghana. It is bordered to the north by Agona Municipal, north-east by the West Akim Municipal, to the south by the Gulf of Guinea, to the east by Gomoa East District and Ga West Municipal, and on the west by the Gomoa West District. The municipality covers an area of 417.3 square kilometres (163 sq miles) and has a population of 68,597 according to a 2010 Population and Housing Census.

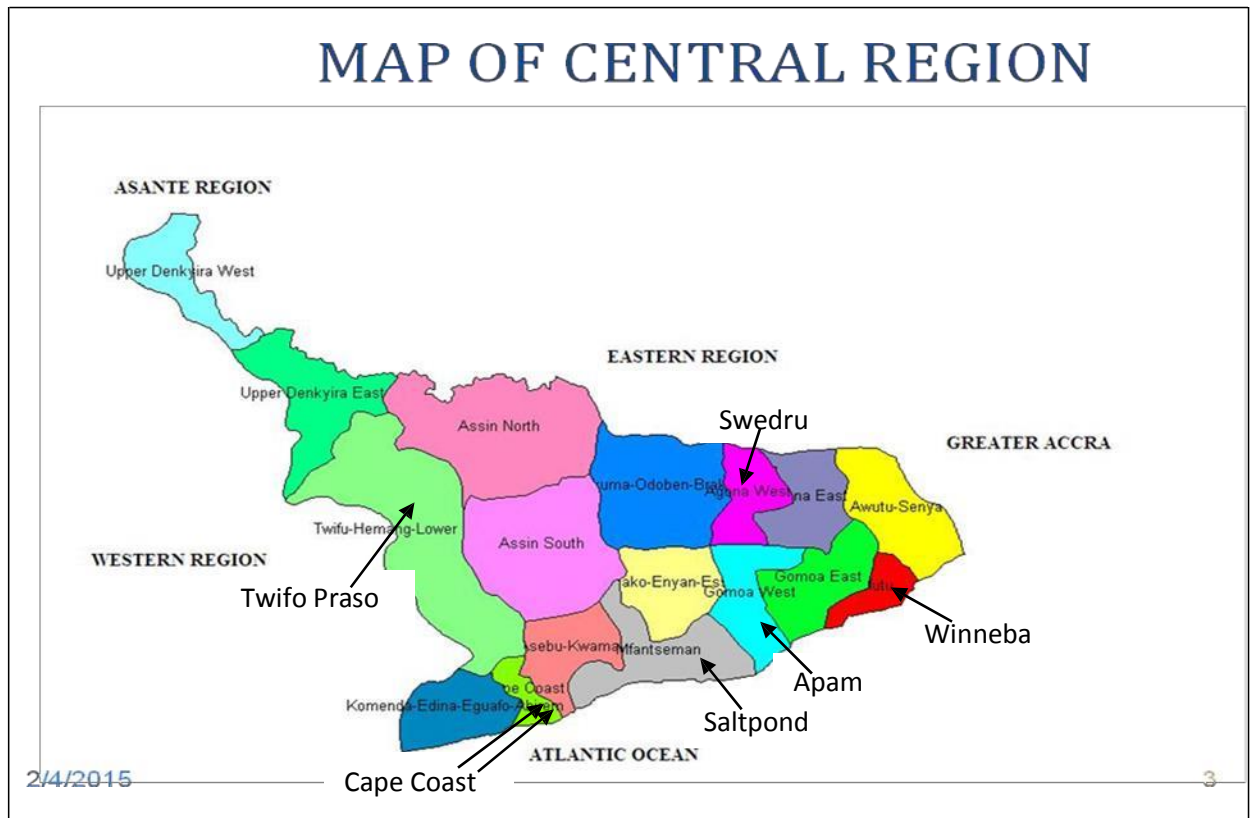


Figure 3.1: Map of Central Region, Ghana (Source: ghanadistricts.com)

The Saltpond Government Hospital has 1145 HIV positive clients and it serves the Mfantseman Municipality. The Municipality is located along the Atlantic coastline of the Central Region of Ghana. It extends from latitude $5^{\circ} 20'$ north of the equator and longitudes $0^{\circ} 44'$ to $1^{\circ} 11'$ west of the Greenwich Meridian, stretching for about 21 kilometres along the coastline and for about 13 kilometres inland. It covers an area of 612 square kilometres. The Municipality shares boundaries with Gomoa West District to the East, to the West with Ekumfi District, to the North with Ajumaku-Enyan-Essiam District and to the South with the Gulf of Guinea.

St.Lukes's Catholic Hospital (Apam) is situated in the Gomoa West District and has 416 HIV positive clients. The district lies within latitude $5^{\circ} 14'$ north and $5^{\circ} 35'$ north and longitude $0^{\circ}22'$ west and $0^{\circ}54'$ west on the eastern part of the Central Region of Ghana.

The District shares boundaries with Gomoa East to the North, to the West with Mfantseman Municipal, to the East with Effutu Municipal and to the South with Gulf of Guinea.

The Swedru Government Hospital ART site resides in the Agona West Municipality and has 1133 ART clinic attendants. The municipality is found in the eastern portion of the Central Region, covers an area of 540-sq. km. and has a population of 160,000. It lies within latitudes $5^{\circ} 30'$ and $5^{\circ} 5'N$ and longitudes $0^{\circ} 35'$ and $0^{\circ} 55'W$. The area is bounded to the East and West by /Effutu Municipal and Asikuma/Odoben/Brakwa Districts respectively. The municipality shares a border to the northeast with Akim West Municipal, to the northwest with Birim-South District and to the South, with Gomoa District. The location of the Swedru Township makes it the commercial centre of the region and a modal point from which roads radiate to the rich cocoa growing countryside of the Region.

The Cape Coast Metropolitan and UCC hospital ART sites are located in the Cape Coast Metropolis with 219 and 135 persons enrolled into ART care respectively. The Metropolis is bounded on the south by the Gulf of Guinea, west by Komenda / Edina / Eguafo / Abrem Municipal, east by the Abura/Asebu/Kwamankese District and north by the Twifo/Hemang/Lower Denkyira District. It covers an area of 122 square kilometres and is the smallest metropolis in the country.

The Twifo Praso Government Hospital ART site attends to 458 clients and is found within the Twifo-Ati Mokwa District. It is located between latitudes $5^{\circ}50'N$ and $5^{\circ}51' N$ and Longitudes $1^{\circ}50'W$ and $1^{\circ}10'W$. The district is bounded on the north by the Upper

Denkyira East Municipal on the south by the Hemang-Lower Denkyira, on the west by the Mpohor Wassa East District and the East by the Assin North Municipal and Assin South District respectively.

3.3. Study Population

The study population consisted of HIV positive clients who were 18 years or older.

3.4. Inclusion and Exclusion Criteria

Only clients aged 18 years or older diagnosed with HIV/AIDS at least six (6) months before the study commenced were recruited for this study. All clients who were too sick to be interviewed were excluded from the study.

3.5. Sample Size

The sample size was determined by three factors:

- (i) the estimated prevalence of the variable of interest – HIV positive status disclosure; (ii) the desired level of confidence, and
- (iii) the acceptable margin of error.

Using simple random sampling techniques, the sample size was calculated according to the following formula:

$$\text{formula: } n = \frac{z^2 \times p(1-p)}{m^2}$$

Description:

n = required sample size

z = confidence level at 95% (standard value of 1.96)

p = estimated prevalence of HIV positive status disclosure in the Central Region. The prevalence of disclosure was unknown for the Central Region or Ghana. Thus an average of about 50% based on reported rates between 16.7% to 86% in developing countries (Kairania et al 2010, Kadowa et al 2009, Medley et al 2004) was used.

m = margin of error at 5% (standard value of 0.05)

Calculation

$$n = \frac{1.96^2 * 0.5(1-0.5)}{0.05^2}$$

$$n = \frac{3.8416 * 0.25}{0.05^2}$$

$$n = \frac{0.9604}{0.0025}$$

$$n = 384.16 \quad n =$$

$$\sim 384$$

Contingency

The sample size was further increased by 20% to make for contingency such as non-response. That is $20\% \times 384 = 76.8 = \sim 77$.

$$n + 20\% = 384 + 77 = \mathbf{461}.$$

Based on this, the sample size for each selected study site was calculated as a proportion of the total sample size relative to the site's enrolled number of HIV positive clients within the inclusion criteria and the total number of HIV positive clients in the Central Region who fall within the age limit defined in the study.

3.6 Sampling Techniques and Procedures

The Central Region has a total of thirteen ART sites. To broaden the scope of the study (targeting more than 50% of the total number of ART sites), seven ART sites were randomly selected using a lottery method. A total of 461 HIV positive clients attending antiretroviral clinics in the region were sampled for the study using random and proportionate sampling techniques.

3.6.1 Sampling Method

The total number of respondents to be interviewed at each site was computed as a proportion of the overall sample size based on the total number of clients per site. Respondents were randomly sampled. Pieces of paper of equal size were numbered 1 to 9, placed in a box and juggled. A piece of paper was blindly selected out of the box to determine the order of selecting clients for the study. This lot fell on number 4. Thus every 4th client attending was interviewed if he/she met the inclusion criteria and gave consent. Data was collected by trained ART Clinic staff using a pre-tested, structured questionnaire designed for the purpose of the study through a face- to- face interview.

The questionnaire was used to collect information on individual characteristics, illness related issues, disclosure status, knowledge on the importance of HIV status disclosure, other audience of disclosure and relationship with partner. The outcome variable for this study is HIV status

disclosure to sexual partner (s) as a dichotomous variable.

3.7. Study Variables

- a) **Dependent variable** : HIV positive status disclosure to sexual partner (s)
- b) **Independent variables**:
 1. **Individual characteristics**: Age, sex, education, marital status, occupation, religion, average monthly income, settlement type
 2. **Illness Related Factors**: time of diagnosis, reason for HIV test, being on ART, treatment adherence monitor
 3. **Psychosocial factors**: disclosure importance, partner's reaction to disclosure, awareness of partner's HIV sero-status, time of disclosure, belonging to an HIV support group, receiving counselling on disclosure.
 4. **Sexual Behaviour**: number of sexual partners, condom use

3.8. Data Collection

Following the patient's completion of their scheduled services at the clinic, the research assistants approached them and asked for consent to be interviewed with assurance that refusal or withdrawal would not affect the services they received at the clinic in future. Those unwilling to participate were not interviewed. Those who accepted were interviewed within the confines of the ART Unit.

Data was collected on a daily basis from morning till the close of outpatient work, except for weekends, over a ten-week period. A total of 461 PLWHA were interviewed. Each interview lasted between 20 to 25 minutes.

On a daily basis the research assistants reviewed all administered questionnaire for

accuracy and completeness and all completed questionnaires were given a number code.

3.9. Training of Data Collectors and Supervisors

Fourteen research assistants and two supervisors (Health Information Officers) were trained for this study, two for each study site. These were mainly nurses and biostatisticians who work at the various ART sites and are fluent in Twi and Fante (native dialects). Their training focused on interviewing skills, correct recording of responses, data collection methods and on ethical values necessary during the execution of the study to minimize non-responses. This orientation was held for a day at the Winneba Municipal Hospital ART Unit.

3.10. Pre-test

Pre-testing was done to enable the data collectors to get familiar with the data collection technique. It also helped in fine-tuning the data collection instrument as questions that were found to be unclear were modified and those found to be unnecessary were deleted. Lastly, the pre-testing made it possible for the researcher to assess the presence of sensitive questions, appropriateness of categorization of variables and flow of questions. The pre-testing was done at the St. Gregory Catholic Hospital ART site, Budumburam, using 10% (n=42) of the anticipated number of participants of the main study to test the questionnaire for validity and reliability of the questions, as well as the feasibility of the method used for the study. The data obtained from the pilot study was not included in the final analysis.

3.11. Validity and Reliability of Instruments

Validity refers to the extent to which the research instrument serves the use for which it is intended (Seidu, 2006). Joppe (2000) defined reliability as the extent to which results are consistent over time and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable. To ensure

reliability of the research instruments, the test-retest technique was used. Two weeks after the first pre-test at Budumburam, twenty (20) clients who took part in the first pilot trial were asked to answer the same questions. The results were subjected to Cronbach's Alpha reliability analysis using STATA SE 13. The first test yielded a reliability coefficient (r) of 0.914 while the second test also resulted in an r value of 0.960. This result implies that the instrument was very reliable; hence it was used for the actual study.

3.12. Quality Control

The data collection processes were standardized in order to achieve the highest level of uniformity of the data collection procedures in the entire study population. The Principal Investigator with the help of two assistants (Health Information Officers) supervised the data collection process and ensured there were no protocol deviations.

The data entry template was designed to resemble the data collection instrument which facilitated data entry. Legal values (valid values) and check codes were incorporated in the data entry template which prevented data entry errors. All completed questionnaires were assigned a unique identification number and this made it easy to trace each piece of information. Data from the study was password-protected and stored on an external storage device. The dataset was used only for the purposes of this study.

3.13. Data Management and Statistical Consideration

Data was entered into SPSS Version 20 statistical package by three data entry personnel independently. The data was cleaned and verified to ensure its accuracy and quality for accurate analysis. The data was analysed using STATA SE 13. Data was properly stored, backed up on an external hard drive and pass-worded at all times to maintain safety and confidentiality.

Univariate analysis of categorical data was expressed as frequencies and percentages. Cross tabulations and frequencies were used to analyze data descriptively. Bivariate analysis was done to evaluate the proportions of variables with the outcome variable. A multiple logistic regression analysis was run to determine any association between independent variables (Individual characteristics and barriers etc.), which were statistically significant association after the bivariate analysis, and the dependent variable (HIV positive status disclosure to sexual partner). This was done at a p value of 0.05. At 95% confidence interval, adjusted odds ratios were calculated to assess the measure of association.

3.14. Ethical and Safety Consideration

Provisional and final ethical clearance for the study was obtained from the Ethical Review Committee (ERC) of the Ghana Health Service. Written approval to commence the study was also obtained from the Hospital Management Committee of each of the seven (7) study sites. Informed written consent was sought from each respondent before they were included in the study.

Every respondent was adequately informed about all aspects of the study including its objectives, interview procedures and potential benefits before interviews were conducted. Interviewers informed respondents about the scope and approximate duration prior to the start of the interview and the fact that their participation was entirely voluntary. Respondents were assured of privacy and confidentiality of any responses they gave during the interview. Also respondents were made aware that they had a right to withdraw from the interview at any time if they so desired.

There were no compensations or direct benefits for respondents. However, due to the sensitivity of issues related to disclosing one's HIV status, a psychological counselling

service was provided for respondents who became emotional by trained ART clinic counsellors. Respondents who desired to discuss aspects of their medical condition were allowed to do so.

CHAPTER FOUR

RESULTS

4.1. Distribution of Respondents from Study Sites

Table 4.1 depicts the total number of consenting clients enrolled into this study in each of the study sites.

Table 4.1: Number of Clients Interviewed at each study site.

Name of Facility	No. of HIV Positive Clients	No. of Clients Approached	No. of Clients Consenting
1. Cape Coast Metro. Hospital	219 (4.8%)	45	22
2. Saltpond Hospital	1145 (25.1%)	130	116
3. St.Lukes's Hospital	416 (9.1%)	39	42
4. Swedru Government Hospital	1133 (24.9%)	146	115
5. Twifo-Praso Hospital	458 (10%)	38	46
6. UCC Hospital	135 (2.9%)	41	14
7. Winneba Municipal Hospital	1053 (23%)	125	106
Total	4559 (100%)	564	461

4.2. Individual Characteristics of Respondents

A total of 461 respondents took part in the study. The overall prevalence of disclosure in this study was 41.2 % (n= 190). Respondents' age ranged from 18 to 65 with a mean age of 33.9 (± 7.4) years. As shown in Table 4.2, a majority of respondents were 20-35 years (35.6%, n= 164) and the age-specific prevalence of disclosure was highest among this age group (66.5%, n=109) compared with other age groups. Although females accounted for 65.5 % (n= 302) of all respondents, disclosure prevalence was higher in males (44.0%, n= 70). About 45.8% (n=211) of respondents had basic education. Respondents who had attained a secondary level of education had a higher prevalence of disclosure (63.6%, n=69) compared with those who

had achieved other levels of educational attainment. Again most respondents were either married or co-habiting (62.7%, n=279), however, widowed or divorced respondents had a higher prevalence of disclosure (53.9%, n=55). A majority of respondents were Christians (78.3%, n =361) but the prevalence of disclosure was higher in respondents with no religious affiliation (81.8%, n=9). Disclosure prevalence was higher among respondents who were self-employed (61.8%, n=63) compared with those who were unemployed (15.8%, n=30). The prevalence of disclosure among respondents who earned less than GH¢ 500.00 monthly was 42.4% (n=84) . Respondents who lived in urban settlements had the lowest prevalence of disclosure (29.1%, n=25) compared with those who lived in other types of settlements. About 61 % (n=283) of respondents financially depended on other people either fully (39%, n=180) or partially (22.3%, n=103).Of this, about 53 % (n=150) reported they depended on a sexual partner and about 29 % (n=82) said they depended on a family member. Among respondents who are married/co-habiting, 94.7% (n=274) live with their sexual partners. About 74% (n=341) of respondents have a child by their sexual partner and 45.9% (n=212) of respondents live within an extended family setting.

Table 4.2: Individual Characteristics of Respondents and Disclosure Prevalence (n=461)

Variable	Freq. (%) n=461	Disclosed n (%)=190	Not Disclosed n (%)=271	Group Specific Disclosure Prevalence (%)
Age (years)				
< 20	58 (12.6)	22 (12)	36 (13.3)	37.9
20-35	164 (35.6)	109 (57)	55 (20.3)	66.5
36-40	135 (29.3)	42 (22)	93 (34.3)	31.1
>40	104 (23.0)	17 (9)	87 (32.1)	16.3
Sex				
Male	159 (34.5)	70 (37)	89 (32.8)	44.0
Female	302 (65.5)	120 (63)	182 (67.2)	39.7
Education				
None	86 (18.7)	17 (9)	69 (25.5)	19.8
Basic	211 (45.8)	91 (48)	120 (44.3)	43.1
Secondary	107 (23.2)	69 (36)	38 (14.4)	63.6
Tertiary	57 (12.4)	13 (7)	44 (16.2)	22.8
Marital Status				
Single	70 (15.2)	25 (13)	45 (16.7)	35.7
Married/Cohabiting	279 (62.7)	110 (58)	169 (62.4)	39.4
Widowed/Divorced	102 (22.1)	55 (29)	47 (17.3)	53.9
Religion				
Christian	361 (78.3)	120 (63)	241 (88.9)	33.2
Islam	70 (15.2)	48 (25)	22 (8.1)	68.6
Traditional	19 (4.1)	13 (24)	6 (2.2)	68.4
No Religion	11 (2.4)	9 (5)	2 (.7)	81.8
Employment				
Government employee	114 (24.7)	48 (25)	66 (24.4)	42.1
Private Organization	148 (32.1)	49 (26)	99 (36.5)	33.1
Self-employed	102 (22.1)	63 (33)	39 (14.4)	61.8
Unemployed	97 (21.1)	30 (16)	67 (24.7)	15.8
Average Monthly Income (GH¢)				
< 500.00	198 (43)	84 (44)	114 (42.6)	42.4
500-1000	147 (31.9)	57 (30)	90 (33.2)	38.8
>1000	116 (25.2)	49 (26)	67 (24.7)	42.2
Settlement Type				
Urban	86 (18.7)	25 (13)	61 (22.5)	29.1
Sub-Urban	250 (54.2)	127 (67)	123 (45.4)	50.8
Rural	125 (27.1)	38 (20)	87 (32.1)	30.4
Total	461	190	271	

4.3 HIV Status Disclosure

Figure 4.1 shows that there were many reasons why respondents got tested for HIV. About half of respondents got tested because they were ill (50.5%, n=233). Routine HIV test at Antenatal Clinics through the Prevention of Mother to Child Transmission of HIV (PMTCT)

programme was the medium through which 23.6% (n=109) of respondents had an HIV test. Voluntary HIV counselling and testing was least cited by respondents as the reason for an HIV test.

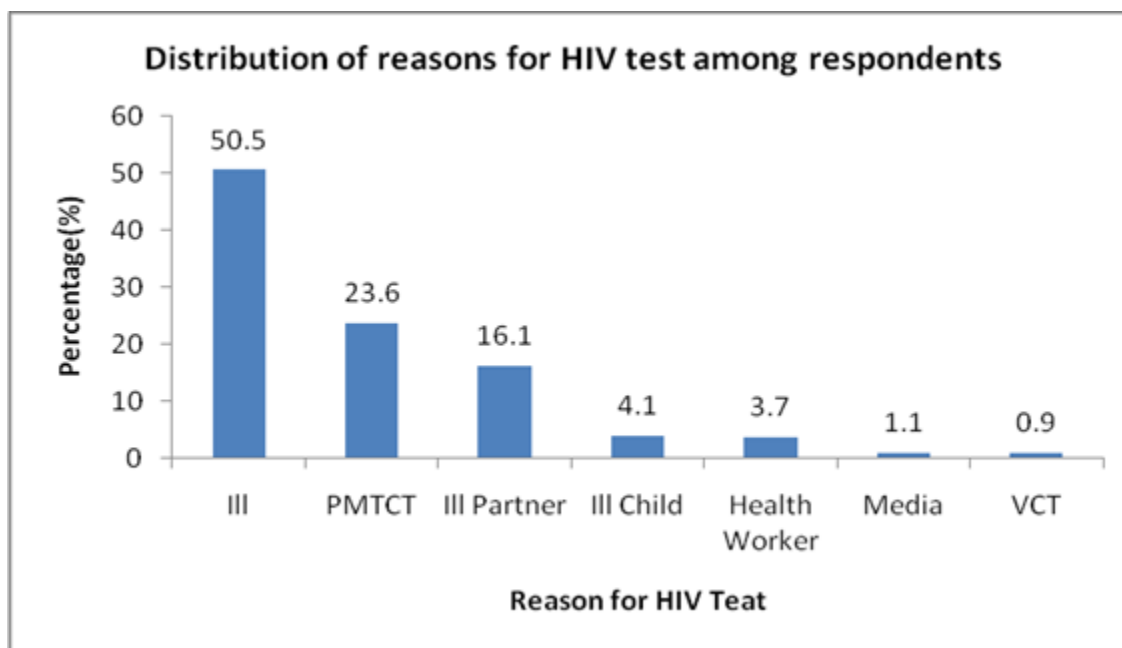


Figure 4.1: Bar chart showing the distribution of reasons for doing an HIV test (n=461)

In Table 4.3, among the 190 respondents who disclosed their HIV positive status to their sexual partners, 45.3 % (n= 86) were encouraged to tell their partner during counselling at the ART clinic. About 21% (n=40) of respondents disclosed to their partners because they used them as their Treatment Adherence Monitor, and 13.2 % (n=25) disclosed because they knew the HIV positive status of their partner. A partner being mature enough to understand their HIV positive status was the reason why 11.1 % (n=21) of respondents disclosed to their partner.

Table 4.3: Distribution of Reasons for Disclosure to partner (n=190)

Reason	Frequency	Percentage (%)
I was encouraged to tell my partner by ART clinic nurse during counselling	86	45.3
Used partner as treatment monitor	40	21.1
Partner is also HIV positive	25	13.2
Partner is matured to understand	21	11.1
Wanting to be honest with partner	10	5.3
To avoid missing ART clinic visits	8	4.2
I suffered medication side effect	6	3.2
Partner wanted to know reason for daily medicines	4	2.1
Total	190	100

Table 4.4 shows that among the 271 respondents who did not disclose their status to their sexual partner, 31.7 % (n=86) cited fear of being divorced or separated from their sexual partner as their reason for not disclosing.

Table 4.4: Distribution of Reasons for Non- Disclosure (n=271)

Reason	Frequency	Percentage (%)
Fear of separation/divorce	86	31.7
Fear of partner violence	65	23.9
Fear of partner anger	46	16.9
Fear of being accused of infidelity	40	14.8
Fear of being ridiculed	16	5.9
Fear of losing partner's financial support	11	4.2
Worry about others knowing status	7	2.6
Total	271	100

Fear of a violent response from a sexual partner, fear that a partner may become angry, and worry about being accused of sexual infidelity by a partner were other major reasons why some respondents had not disclosed.

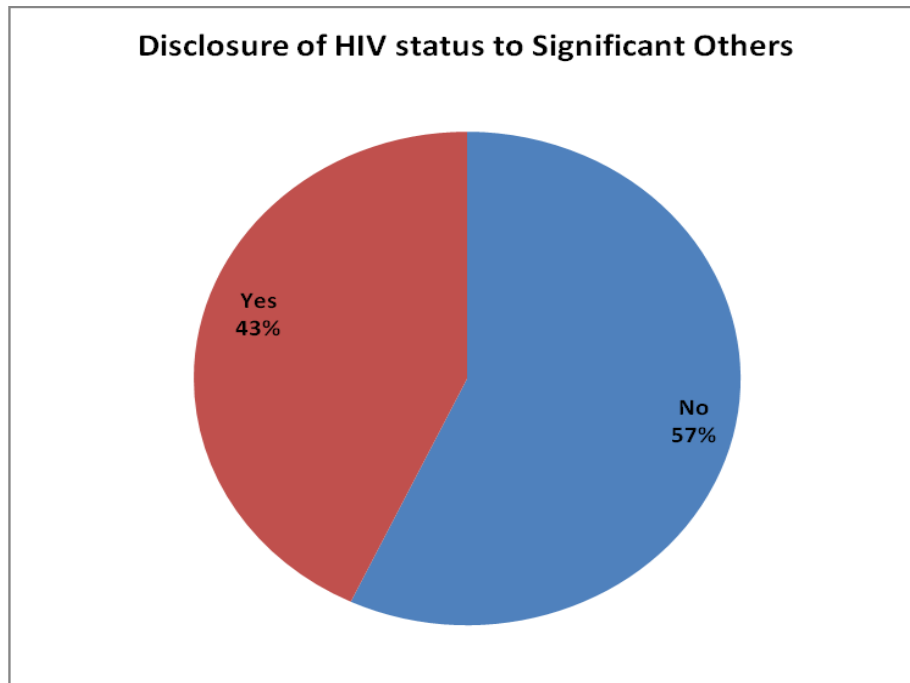


Figure 4.2 Frequency of disclosure to significant others

In Figure 4.2, among those who had not disclosed to their sexual partner, about 43% (n=117) had disclosed to some other person (s). Therefore, about 84.6 % (n=307) of respondents had made some sort of status disclosure (either to a sexual partner or to a significant other). However, 15.4 % (n=71) respondents had not disclosed their status to anyone yet.

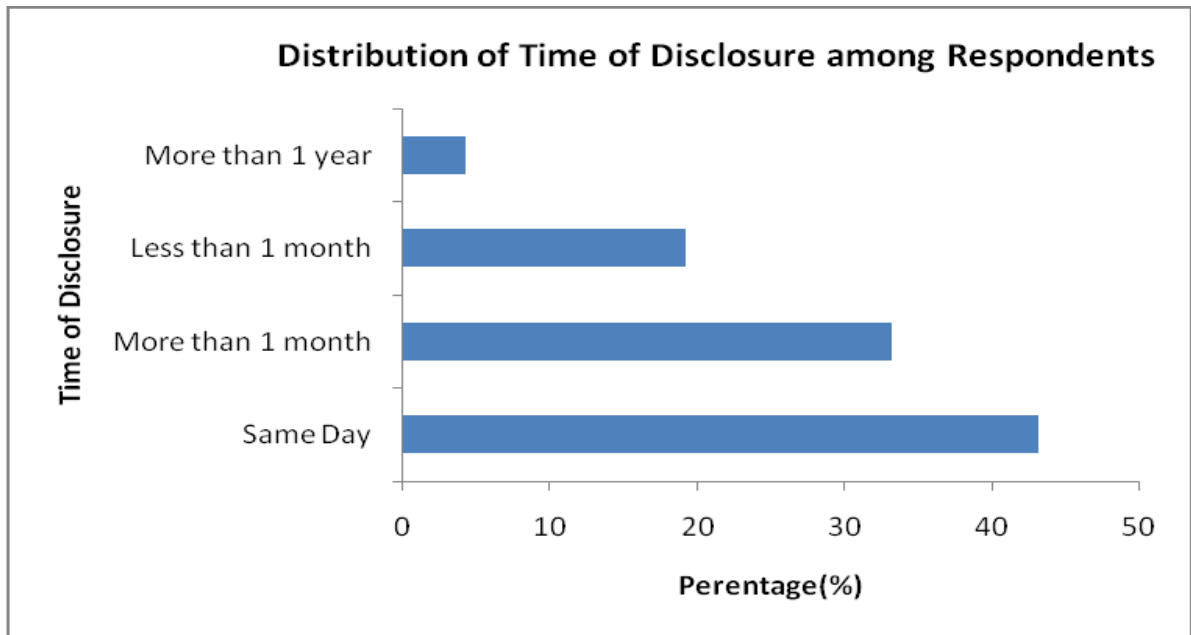


Figure 4.3: Bar chart showing time of disclosure to sexual partner after HIV test (n=190)

As shown in Figure 4.3, only 43% of respondents who disclosed their HIV positive status to their sexual partner(s) did so on the same day they received their HIV test result. Most respondents who disclosed their HIV positive status to their partner(s) did so more than a month after diagnosis.

Table 4.5 shows a bivariate analysis of individual characteristics of respondents and their influence on HIV positive status disclosure. From the table, there is a strong evidence of an association between age of respondents and disclosure of an HIV positive status ($X^2=75.65$, $p<0.0001$) to a partner. Also the level of education attained by respondents ($X^2=48.55$, $p<0.0001$) and marital status ($X^2 =8.86$, $p=0.012$) were significant determinants of disclosure.

Table 4.5: Bivariate Analysis: Individual Characteristics of Respondents (n=461)

Variable	Freq. n=461	Disclosed n =190	Not Disclosed n=271	Chi-Square (p-value)
Age (years)				
<20	58	22	36	75.65(p<0.0001)
20-35	164	109	55	
36-40	135	42	93	
>40	104	17	87	
Sex				
Male	159	70	89	0.79(p=0.374)
Female	302	120	182	
Education				
None	86	17	69	48.55 (p<0.0001)
Basic	211	91	120	
Secondary	107	69	38	
Tertiary	57	13	44	
Marital Status				
Married/Cohabiting	286	110	179	8.86(0.012)
Single	70	25	45	
Divorced/Widowed	102	55	47	
Religion				
None	11	9	2	44.39(<0.0001)
Christian	361	120	241	
Moslem	70	48	22	
Traditional	19	13	6	
Employment				
Unemployed	97	30	67	26.07(<0.0001)
Government	114	48	66	
Private	148	49	99	
Self-Employed	102	63	39	
Average Monthly Income (GHC)				
<500	198	84	114	0.53 (p=0.767)
500-1000	147	57	90	
>1000	116	49	67	
Settlement Type				
Rural	125	38	87	20.75(p<0.0001)
Sub-Urban	250	127	123	
Urban	86	25	61	
Total	461	190	271	

Again, religious affiliation ($X^2=44.39$, $p<0.0001$) and employment status ($X^2=26.07$, $p<0.0001$) were significantly linked to an HIV positive status disclosure to a sexual partner. The settlement type in which a respondent lived was statistically associated with disclosure ($X^2=20.75$, $p<0.0001$). However, gender and average monthly income did not attain a

statistically significant association with disclosure.

As shown in Table 4.6, ART status ($X^2 = 24.63$, $p < 0.0001$), knowledge of a partner's HIV status ($X^2 = 79.65$, $p < 0.0001$) and condom use ($X^2 = 7.97$, $p = 0.019$) were significant determinants of HIV positive status disclosure to a sexual partner.

Table 4.6: Bivariate analysis: Factors associated with disclosure (n=461)

Variable	Total (%) n=461	Disclosed (%) n=190	Not Disclosed n=271	Chi-Square (p-value)
ART Status				
Yes	342	118	224	24.63 (p<0.0001)
No	119	72	47	
Received Counselling				
Yes	395	160	235	0.57 (p=0.450)
No	66	30	36	
Member of Support Group				
Yes	26	9	17	0.49 (p=0.482)
No	435	181	254	
Partner's HIV Status				
Positive	133	94	39	79.65 (p<0.0001)
Negative	13	10	3	
Unknown	315	86	315	
Multiple sexual partners				
Yes	51	20	31	28.12 (p<0.0001)
No	410	170	240	
Disclosure is important				
Yes	278	187	91	196.17 (p<0.0001)
No	183	3	180	
Condom use				
Always	85	44	41	7.97 (p=0.019)
Never	166	56	110	
Sometimes	210	90	120	
Has treatment Monitor				
Yes	298	179 (79.9)	119	123.64 (p<0.0001)
No	163	11 (4.6)	152	
Total	461	190	271	

Knowing that disclosure is important significantly predicted HIV positive status disclosure among respondents ($X^2 = 196.17$, $p < 0.0001$), as well as having a Treatment Adherence Monitor ($X^2 = 123.64$, $p < 0.0001$). Also, the number of sexual partners a respondent had significantly influenced a decision to disclose or not to disclose

($X^2 = 28.12$, $p < 0.0001$). However, receiving counselling on disclosure and belonging to an HIV support group did not statistically influence HIV positive status disclosure to a sexual partner.

In the multiple regression analysis shown in Table 4.7, respondents who were 20 to 35 years of age were about 5 times more likely to disclose an HIV positive status to a sexual partner compared with respondents younger than 20 years (AOR: 5.49; 95% CI, 1.87-16.14). Though sex was not statistically significant in the bivariate analysis it was included in the logistic regression model as an 'a priori' variable. However, there wasn't sufficient evidence to demonstrate that the proportion of respondents who disclosed differed by sex (AOR 0.74, 95% CI: 0.33; 1.64).

Respondents who had a higher educational level above basic were about 75% more likely to disclose than those with basic education or no formal education at the crude analysis level (COR: 1.75; 95% CI, 0.15-0.67). However, this association was not significant after adjusting for confounders. Compared with non-Christians, Christians were 24% less likely to disclose (AOR: 0.24; 95% CI, 0.09-0.65). Before adjusting for confounders, being employed (COR 1.75; 95% CI, 1.09-2.82) and living in a sub-urban settlement (COR: 2.36; 95% CI, 1.50-3.72) were significantly associated with disclosure. This association was not significant after adjustment.

Respondents who were on ART were about 21% less likely to tell their partners about their HIV positive status (AOR: 0.21; 95% CI, 0.09-0.54) compared with those who were only receiving prophylaxis against opportunistic infections. Respondents who knew the HIV status of their sexual partner were almost seven (7) more likely to disclose (AOR: 6.89; 95% CI, 2.81-16.88) compared with those who did not know.

Table 4.7: Multiple Logistic Regression of Factors Associated with Disclosure (n=461)

Variable	Disclosed (n)	Not Disclosed (n)	AOR (95%CI)	p value (AOR)
Age (years)				
<20	22	36	Ref.	Ref.
20-35	109	55	5.49(1.87-16.14)	p<0.002
36-40	42	93	1.18(0.38- 3.65)	p=0.779
>40	17	87	0.16(0.05-0.56)	p<0.004
Sex				
Male	70	89	Ref.	Ref.
Female	120	182	0.74(0.33-1.64)	
Education				
Basic and Below	108	189	Ref.	Ref.
Secondary and Above	82	82	1.12(0.49- 2.54)	p=0.79
Religion				
Others	70	30	Ref.	Ref.
Christian	120	241	0.24(0.09-0.65)	p<0.05
Employment				
Unemployed	30	67	Ref.	Ref.
Employed	160	204	1.49(0.62-3.59)	p=0.38
Settlement Type				
Rural	38	87	Ref.	Ref.
Sub-Urban	127	123	1.29(0.53-3.16)	P=0.57
Urban	25	61	0.55(0.18-1.71)	P=0.30
ART Status				
No	72	47	Ref.	Ref.
Yes	118	224	0.21(0.09-0.54)	p<0.001
Partner's HIV Status				
Unknown	86	229	Ref.	Ref.
Known	104	42	6.89(2.81-16.88)	p<0.000
Number of Sexual partners				
			1.43(0.83-2.45)	p=0.196
Disclosure is important				
No	3	180	Ref.	Ref.
Yes	187	91	227.0(46.13-1116.9)	P<0.000
Has treatment Monitor				
No	11	152	Ref.	Ref.
Yes	179	119	17.25(6.30-47.21)	P<0.000

AOR : Adjusted Odds Ratio

Knowing the relevance of disclosure (AOR: 227.0; 95%CI, 46.13-1116.9) and having a treatment adherence monitor (AOR: 17.25; 95%CI, 6.30-47.21) were significant determinants of disclosure. Although the number of sexual partners a respondent had significantly predicted disclosure at the crude analysis level (COR: 1.43; 95% CI, 1.10-1.87), this significance was lost after adjusting for confounders.

CHAPTER FIVE

DISCUSSION OF RESULTS

5.1. Individual Characteristics and Prevalence of Disclosure

Overall, this study found the prevalence of HIV positive status disclosure to a sexual partner in the seven (7) selected ART sites in the Central Region to be 41.2% (n=190). Also, 42.4% (n=115) of respondents had disclosed to persons other than their sexual partner (s). Only 70 (15.4%) of the respondents had not made any disclosure of HIV positive status to anyone. This finding agrees with disclosure prevalence rates in developing countries which range between 16.7% to 86% reported by Kadowa et.al (2009). In their study, Wong et.al (2009) found that 13% of respondents never disclosed to anyone. About 3% (n=14) of respondents in this study are in sero-discordant relationships. There was an association between the age of a respondent and disclosure of HIV positive status. Respondents who were 20-35 years old were about 5 times more likely to disclose compared with those who were younger. This finding agrees with O'Brien et.al (2003) who found that persons older than 20 disclosed more. Respondents may be disclosing to receive psychosocial support from their sexual partner(s) and others.

The prevalence of disclosure was higher among males (41.2%, n=70) than females (39.7%, n=120). This finding is supported by similar studies done by Bachanas et.al (2013) in Kenya and Namibia and Lugalla et.al (2011) in Tanzania, which reported that more males compared with females disclosed an HIV positive status to a sexual partner. Females may be economically and socially vulnerable therefore they find it safer to remain silent on their HIV positive status.

This study found no significant difference in respondents' level of educational attainment and disclosure. This was a similar finding by Kadowa et.al (2009). This however, differs from a study by Medley et.al (2004) which found that individuals with a higher level of education disclosed more than those with little or no formal education.

There was a statistically significant association between religion and disclosure. Compared with others, Christians were about 24% less likely to disclose (AOR: 0.24; 95% CI, 0.09-0.65). Findings in this study do not support an association between marital and employment status and disclosure ($p>0.05$). There was also no significant association between the type of settlement in which a respondent lived and disclosure of HIV positive status, though it is thought that because rural communities are more conservative it may be more difficult to disclose because the issue of stigmatisation is often amplified.

5.2. Barriers to Disclosure

In this study, respondents reported fear of divorce or separation, fear of a violent response to disclosure from a sexual partner, fear of a partner becoming angry and worry about being accused of sexual infidelity as key reasons why they had not disclosed. This is similar to findings in a study by Chaudoir et.al (2011). In an enabling environment, disclosure enhances emotional and social support. If the environment is not right, it may place the disclosing individual at an increased risk of physical violence and discrimination from the recipient of the disclosure information. The fear of a negative outcome following HIV sero-status disclosure may result in individuals opting to withhold their status. This finding signifies the importance of increasing awareness in communities to minimize stigma associated with HIV infection. Separation and divorce have been documented as major factors which hinder disclosure. Mucheto et al. (2009) reported that women who believed

disclosure would cause divorce were less likely to disclose in a study conducted in Zimbabwe.

5.2.1 Knowledge of partner's HIV status

This current study found that respondents were most likely to disclose if they knew their partner's HIV status (AOR: 6.89; 95% CI, 2.81-16.88). This is similar to the findings of two separate studies conducted in Ethiopia by Mohammed et al (2012) and Taye et.al (2010).

Knowing a partner's HIV status may help couples to have open communication and freedom to disclose their status.

5.2.2 Disclosure time after HIV test

About 37.4% (n=71) of respondents who disclosed did so more than a month after receiving their HIV positive test result. This finding agrees with Deribe et al. (2007) who found that the time from diagnosis to disclosure varied from one day to two years. The ability to disclose one's HIV-positive status can be related to the extent to which an individual has accepted his or her HIV diagnosis. It is often most difficult to disclose soon after diagnosis, when a person is grappling with the initial impact of his or her HIV- positive status. However, delayed disclosure increases the risk of transmission of HIV infections especially when condoms are not used during sexual contact and this may wane the benefits of HIV status disclosure.

5.2.3 ART status

This study found a significant association between being on antiretroviral therapy and status disclosure to a sexual partner. Respondents who had been initiated on ART were less likely to disclose their status (AOR: 0.21; 95% CI, 0.09-0.54). This was an unexpected finding because of the fact that people on ART receive pre- ART counseling, during which disclosure is

emphasized to enhance care and support. Additionally, ART is initiated for people who have developed overt AIDS symptoms that cannot easily be concealed from others.

5.2.4 Counselling on disclosure

Receiving counselling on disclosure at the ART clinic did not statistically influence a respondent's decision to disclose or not to disclose in this study. This was a curious finding. It seems that disclosure counselling received at the ART sites was inadequate to motivate disclosure. Kadowa et al. (2009) reported that counselling was a positive predictor of sero-status disclosure in studies conducted among PLWHA in Uganda.

5.2.5 Multiple sexual partners

This study did not find a significant association between increased number of sexual partners and disclosure. It is however documented that individuals are less likely to disclose their HIV positive status if they have multiple sexual partners and are more likely to engage in unprotected sex (Eustace & Ilagan, 2010).

5.2.6 Disclosure importance

The current study found a significant difference between those who disclosed and those who did not in terms of their knowledge on the importance of HIV status disclosure. The odds of disclosure was about 227 times higher in those who knew the importance of disclosure (95% CI, 46.13-1116.9). It may be that respondents who knew were disclosing to receive benefits of disclosure such as increased socio-economic support and a freedom to access HIV care and to prevent transmission of HIV infection.

5.2.7 Treatment adherence monitor

Having a treatment adherence monitor strongly influenced disclosure of HIV positive status to a sexual partner in this study (AOR: 17.25; 95% CI, 6.30-47.21). This finding may be because treatment adherence monitors provide emotional and psychological support necessary to encourage disclosure.

5.2.8 HIV support group

Belonging to an HIV support group was not associated with self-reported disclosure of HIV positive status to a sexual partner. This was a surprise finding because such groups facilitate open discussions on pertinent aspects of the HIV disease, including disclosure. Support groups seem to provide the much needed support and coping skills to accept an HIV positive status. Thus members of such groups have a more positive outlook on disclosure.

5.2.9 Condom Use

This study did not find a significant association between disclosure and condom use. Condom use needs agreement between partners. A partner who always insists on using a condom during sexual intercourse could raise suspicion from his/her counterpart. Pinkerton et.al (2009) identified that an increase in the use of condoms resulted predominantly after disclosure.

5.3 Limitations of the Study

This study was based on self-reported disclosure and was not verified by a partner. This may have over or underestimated disclosure status as participant's responses may have been affected by social desirability and recall bias.

Again, the cross sectional study design employed has inherent weakness in establishing temporal relationship between exposure and outcome. Therefore, the barriers identified may not be causal. Moreover, the facility nature of the study indicates that most patients who are more likely to disclose would be seen. Patients attending health facilities are more likely to encounter counselling and be able to develop skills and self efficacy to disclose.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1. Conclusions

The prevalence of HIV status disclosure among sexual partners in the Central Region is 41.2%. Being of age 20-35 years, knowing a partner's HIV status, knowing the importance of disclosure, and having a treatment adherence monitor were found to positively influence disclosure of HIV status among sexual partners. The delay in disclosing and the significant proportion of respondents who had not disclosed to their sexual partner are an indication that there is an increased need for greater community awareness on the impact of violence, stigma and discrimination.

6.2. Recommendation

- Counsellors in ART Clinics should place more emphasis on counselling on disclosure after receiving HIV positive results. This should be an effective, on- going practice which should result in changes in attitudes towards disclosure.
- The Ghana National AIDS Control Programme (NACP) should design and implement programmes aimed at educating the general population on the importance of disclosure so as to reduce the perceived consequences of disclosure such as stigma and discrimination.
- HIV positive individuals should be encouraged to have treatment adherence monitors. These monitors provide the much needed support and coping skills which may status disclosure.

- The NACP should increase education on regular condom use among HIV positive couples.

6.3 Suggestion for Further Research

There is a need for further research in assessing the effectiveness of HIV counselling in increasing disclosure rate in Ghana. A cohort study on disclosure to sexual partner (s) would be most suitable in identifying the causal effect of the barriers identified in this study.

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APPENDIX A

CONSENT FORM

BARRIERS TO DISCLOSURE OF HIV STATUS TO SEXUAL PARTNER IN THE CENTRAL REGION, GHANA

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General Information:

The purpose of this study is to determine the disclosure rate of HIV positive status, and barriers to status disclosure to sexual partner among clients attending Antiretroviral Clinic.

The study will involve HIV positive clients attending routine ART clinics in the following hospitals; Winneba Municipal Hospital, St. Luke's Hospital (Apam), Cape Coast Metropolitan Hospital, University of Cape Coast Hospital, Swedru Government Hospital, Saltpond Municipal Hospital and the Twifo-Praso Government Hospital. It is expected that the results of this study will provide a basis for policy regarding HIV/AIDS status disclosure. As part of this study, you have been selected to help in obtaining information for this study. If you agree to be part of this research, it will involve answering some questions that will be posed to you by a member of the research team. The expected duration of this process will be about 30 minutes.

Possible Risks and Discomforts

The research will not pose any risks to you. You may however experience some minor discomfort in answering certain questions. You may refuse to answer any question if you feel uncomfortable about it.

Possible Benefits

You may not directly benefit from this study but the findings may be used by the Ghana AIDS Control Programme to formulate policies on HIV status disclosure which would have far-reaching benefits.

Confidentiality

All the information obtained will be confidential and used solely for the purpose indicated for the study. The information will be securely stored without name or any traceable identity and in a file which will only be accessible to the research team. The results of this study will be disseminated in such a way that no information will be linked to your identity.

Compensation

Participation in this study is purely voluntary. There is no compensation available to you for accepting to be part of this study.

Choice of Participation

You do not have to participate in this study if you do not wish to. Your refusal to participate will not attract any penalty. If you agree to participate, you can withdraw consent and discontinue participation at any time. This will not affect you in any way.

Contact Numbers

If you have any questions, you may ask them now. You may also contact the following people if you have any challenges relating to your participation in the study:

Dr. Priscillia Nortey

Killian Akwasi Boampong-Konam

Tel: 0208181120

Tel: 0244485843/0202013515

E-mail: panortey @ gmail.com

E-mail: killy822003@yahoo.co.uk**PARTICIPANT AGREEMENT**

I have read the written information (or have had the information read and adequately explained to me) for the study “**Barriers to disclosure of HIV status to sexual partner in the Central Region, Ghana**”

I have been given satisfactory responses to the questions I posed regarding this study. I have also been given time and opportunity to consider taking part in this study. I therefore willingly agree to participate in this study.

Instructions:
INTERVIEWER: INTRODUCE YOURSELF TO THE CLIENT
<p>I am a student of the University of Ghana School of Public Health. As part of my MPhil dissertation, I am collecting data on “barriers to disclosure of HIV status to sexual partner” in the Central Region.</p> <p>All information collected from this survey will be confidential. I am asking for your assistance to ensure accurate information is collected. However, participation in answering questions in this survey is voluntary. You may refuse to answer any question or all the questions.</p>
<p>SIGNATURE OF INTERVIEWER INDICATES PARTICIPANT’S AGREEMENT TO PARTICIPATE AND THAT THE TIME IS CONVENIENT</p>

.....
Signature or Thumbprint
of Respondent

.....
Date

If a participant cannot read the document, then a Witness is needed:

I was present during the reading and explanation of the consent document to the participant. All questions from the participant were duly answered and the participant agreed to participate in the study.

.....
Signature of Witness

.....
Date

I certify that the purpose and nature of the research, the potential benefits and possible discomforts associated with participating in this research have been explained to the participant who has agreed to voluntarily participate.

.....
Signature of Person
Who Obtained Consent

.....
Date

APPENDIX B

QUESTIONNAIRE

Questionnaire for Persons attending Routine ART Clinic at Selected Treatment Sites on the Topic “**Barriers to Disclosure of HIV Positive Status to Sexual Partner in the Central Region**”. The purpose of this study is to fulfil an academic requirement for the award of M.PHIL APPLIED EPIDEMIOLOGY AND DISEASE CONTROL. For this reason sincere and accurate responses are required.

Please, you are assured of adequate confidentiality of all your responses. These responses will be used for academic purpose only. Thank you for the maximum co-operation.

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. Age (in completed years): []
2. Sex: Male [] (b) Female []
3. Highest level of education: None [] Basic [] Secondary [] Tertiary []
Other [] (**Please specify**).....
4. Marital Status: Married [] Single [] Cohabiting [] Divorced [] Widowed []
5. If you are married or cohabiting, do you live with your partner/spouse? Yes [] No []
No response []
6. For how long (in years) have you been living with your partner/spouse?
Less than 1 year [] 1 - 2 years [] 2 – 3 years [] More than 3 years [] Other []
(**Please specify**)
7. If No in question 5, how often do you visit your partner/spouse?
Daily [] Weekly [] Monthly [] Yearly [] Other [] (**Please specify**)

8. How many other partners do you have?
9. Do you have children with your regular sexual partner? Yes [] No []
10. If Yes, do you live with them? Yes [] No []
11. What type of family do you have?
Nuclear [] Extended [] Both/Joint []
12. How would you describe your settlement type?
Rural [] Sub-urban [] Urban [] Other [], (**Specify**)
13. What is your employment status?
Government employee [] Private Company []
Self - employed [] Unemployed [] Other [], (**Specify**)
14. Which of the following best describes your average monthly income?
Less than GHC 500 [] GHC 500 – 1000 [] Above GHC 1000 []
15. Kindly describe your financial status. Independent [] Partially dependent []
Dependent []
16. If dependent/partially dependent, on whom? Sexual Partner [] Children []
Family [] Members [] Support groups [] Church [] Other (specify)
.....
17. What is your religion?
Christianity [] Islamic [] Traditional [] Other [] (**Specify**).....
18. Do you belong to any HIV support group? Yes [] No []
19. If yes, which support group do you belong to?

SECTION B: HIV POSITIVE STATUS DISCLOSURE OR NON-DISCLOSURE

20. How old (in years) were you when you were diagnosed of HIV?

.....

21. Why did you get tested for HIV?

I fell sick [] Partner's illness/death [] Child illness/death []

I heard on the radio/TV that I should get tested [] Health provider recommended []

Family or friend encouraged me to get tested []

I was pregnant and the clinic tested me [] Through HTC []

Other [] **(Please specify)**.....

22. Did you receive any counselling with respect to HIV status disclosure?

Yes [] No []

23. Have you disclosed your HIV status to your partner? Yes [] No []

24. If **No** in question 23, have you shared your HIV status with anybody?

Yes [] No []

25. How long (in days, months, years) after testing did you tell your partner about your HIV status?.....

26. Indicate the reaction (s) of your partner towards your disclosure (**Please you may tick**

more than 1 option)

Sadness [] Anger [] Denial [] Frustration [] Depression Other []

(specify).....

27. Which of these reasons influenced or motivated (encouraged) your disclosure of HIV status to your partner? (**Please you may tick only 1 option**)

a. I used my partner as my support person []

- b. My partner wanted to know the reason for the daily medications []
- c. My partner is also HIV positive []
- d. In order not to skip appointment []
- e. I suffered side effects of the medication []
- f. My partner is old enough to understand the situation []
- g. My partner found out and confronted me []
- h. I wanted to be honest with my partner []
- i. I received counselling with respect to HIV status disclosure []
- j. Other [] (**specify**).....

28. Which of these reasons most prevent you from disclosing your status to your sexual partner? **(Please you may tick only 1 option)**

- a. Fear that my partner will withdraw (divorce/separate) from me []
- b. Fear that my partner will get angry []
- c. Fear that my partner will commit suicide []
- d. Worry about other people finding out about my HIV status []
- e. Fear of family maltreatment []
- f. Fear of partner physical violence []
- g. Fear of accusation/condemnation by partner of infidelity []
- h. Fear of withdrawal or loss of financial support from sexual partner []
- i. May get ridiculed by others []
- j. I received no or inadequate counselling with respect to HIV status disclosure []
- k. Other [] (**Please specify**).....

29. Are you on ART? Yes [] No []

30. When did you start taking ART? Less than 1 year 1 – 2 years 2 – 3 years
More than 3 years
31. Do you have a treatment monitor? Yes No
32. If **Yes**, who is your treatment monitor? My partner My pastor/Church member
Friend Family member Other (**specify**)
33. Why did you choose him/her as your treatment monitor?
- Treatment monitor is HIV positive
 - Treatment monitor is trustworthy
 - Treatment monitor provides or offers care & support
 - Treatment monitor is a social relation/relative (partner/spouse, sister)
 - Treatment monitor is a pastor/counsellor
 - Other (**specify**).....
34. What is your partner's HIV status?
Positive Negative Don't Know

IMPORTANCE OF STATUS DISCLOSURE

35. Do you think it is important to tell your sexual partner that you are HIV positive?
Yes No No response
36. Why do you think it is important to tell your sexual your sexual partner that you are HIV positive?.....
37. How did you get to know that it is important to tell your sexual partner?
ART Clinic Church Internet Media
Family Friends Other (**Please specify**)
38. Do you think it is important to tell others about your status?
Yes No (c) No response

SEXUAL BEHAVIOUR

39. Currently, how many sexual partners do you have?

One [] Two [] Three [] More than 3 []

40. How often do you use a condom during sex?

Never [] Always [] Sometimes [] Seldom/rarely/hardly ever []

41. Would you refuse or deny your regular partner of sex without a condom?

Yes [] No [] No response []

Thank you.

APPENDIX C

ETHICAL CLEARANCE/LETTERS OF PERMISSION

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

*In case of reply the
number and date of this
Letter should be quoted.*



*My Ref. :GHS-ERC: 3
Your Ref. No.*

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
Tel: +233-302-681109
Fax + 233-302-685424
Email: Hannah.Frimpong@ghsmail.org

8th June, 2015

Killian Boampong-Konam
School of Public Health
University of Ghana

ETHICS APPROVAL - ID NO: GHS-ERC: 21/04/15*

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol titled:

“Barriers to disclosure of HIV status to sexual partner in the Central Region, Ghana”

This approval requires that you inform the Ethics Review Committee (ERC) when the study begins and provide Mid-term reports of the study to the Ethics Review Committee (ERC) for continuous review. The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Please note that any modification without ERC approval is rendered invalid.

You are also required to report all serious adverse events related to this study to the ERC within seven days verbally and fourteen days in writing.

You are requested to submit a final report on the study to assure the ERC that the project was implemented as per approved protocol. You are also to inform the ERC and your sponsor before any publication of the research findings.

Please note that this approval is given for a period of 12 months, beginning June 8th 2015 to 7th June 2016.

However, you are required to request for renewal of your study if it lasts for more than 12 months.

Please always quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.....
DR. CYNTHIA BANNERMAN
(GHS-ERC CHAIRPERSON)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra



NATIONAL CATHOLIC HEALTH SERVICE

Tel: 233-41-21549
Fax:233-
Email:
website: www.apamhospital.com

Catholic Hospital,
P. O. Box 5,
Apam.

Our Ref: SLCH/QS/01/15
Your Ref:

20th May.2015

Dear All,


PERMISSION TO UNDERTAKE RESEARCH PROJECT

This serves to inform all that permission has been granted to **Mr.Killian Boampeng-Konam**,MPhil Student (Applied Epidemiology and Disease Control) for the research project titled **“Barriers to disclosure of HIV status to sexual partner in Central Region, Ghana”** to be undertaken at St. Luke Catholic Hospital.

We wish him very well in this research project.

Thank you.

Yours faithfully,


.....
Dr.Frank Odame
(Ag.Medical Director)

CC:

The Nurse Manager,St.Luke Catholic Hospital,Apam
The HR Manager,St.Luke Catholic Hospital,Apam
The Principal Accountant,St.Luke Catholic Hospital,Apam

APAM HOSPITAL
P. O. BOX 5
NURSE MANAGER

In case of the reply the number and the date of this letter should be quoted.



GHANA HEALTH SERVICE
DISTRICT HOSPITAL
P. O. BOX TW 190
TWIFU PRASO
CENTRAL REGION

My Ref No THLD/DH/G-02/42

Your Ref. No...

15TH MAY, 2015

Tel: No. 03321-91090
03321-91163

THE CHAIRMAN
ETHICS REVIEW COMMITTEE
GHANA HEALTH SERVICE
ACCRA

PERMISSION TO UNDERTAKE RESEARCH PROJECT

Management has approved the use of our facility as the site for the research project titled "barriers to disclosure of HIV status to sexual partner in Central Region, Ghana" to be conducted by Killian Boampong-Konam M.Phil student (Applied Epidemiology and Disease Control).

The student is further assured of the extension of the anticipated curtesy to enable him realize his objective in particular and to the service in general.

Thank you.


DR. JOHN BENJAMIN ANNAN
(MEDICAL SUPERINTENDENT)

MEDICAL SUPERINTENDENT
DISTRICT HOSPITAL
P. O. BOX TW 190
TWIFU PRASO

GHANA HEALTH SERVICE

*In case of the reply the
number and the date of
this letter should be quoted.*



SWEDRU MUNICIPAL HOSPITAL
P. O. BOX 29
AGONA SWEDRU
CENTRAL REGION
GHANA.

My Ref. No. ADH/10/135

swedgovhosp@gmail.com

Your Ref. No.

May 5, 2015

Tel: 033020 20337

Fax: 0332021589

PERMISSION TO UNDERTAKE RESEARCH PROJECT

This serves to inform you that permission has been granted (to **Killian Boampong-Konam**, MPhil student (Applied Epidemiology and Disease Control)) for the research project titled "**Barriers to disclosure of HIV status to sexual partner in the Central Region, Ghana**" to be undertaken at the Swedru Municipal Hospital.

We wish him well in this endeavour.

Thank you.

Health Services Administrator
Swedru Municipal Hospital
Agona Swedru

(UMAR N. MOHAMMED)
PRIN. HEALTH SERVICE ADMINISTRATOR

THE CHAIRMAN
ETHICS REVIEW COMMITTEE
GHANA HEALTH SERVICE

**GHANA HEALTH SERVICE
CAPE COAST METROPOLITAN HOSPITAL**

*In case of reply the number and the date
of this letter should be quoted.*



P. O. BOX 174
CAPECOAST
CENTRAL REGION - GHANA

My Ref. No. ...CCMH/G.....

Tel/Fax: 03321-32163/32161, 32165

Email: ccmhghs@yahoo.com

Your Ref. No.

Date: 8th May 2015

TO WHOM IT MAY CONCERN

RE: PERMISSION TO CONDUCT RESEARCH PROJECT

I refer to your letter dated 8th February 2015 on the above subject and thereby grant your request to enable *Mr. Killian Baompong-Konam* to collect data for the research proposal titled "*Barriers to disclosure of HIV status to sexual partners in the Central Region, Ghana*"

Thank you.

A handwritten signature in black ink, which appears to be "D. G. Demanya", is written over the typed name and title.

**DR. D. G. DEMANYA
MEDICAL SUPT.
METROPOLITAN HOSPITAL
P. O. BOX 174, CAPE COAST**

**DR. D. G. DEMANYA
[MEDICAL SUPERINTENDENT]**

In case of the reply the number and the date of this letter should be quoted.

My Ref. No SPH/CR-26/15/51

Your Ref. No.

Tel. No. 0244508385



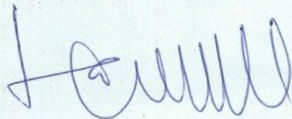
MUNICIPAL HOSPITAL
P. O. BOX 29
SALTPOND
MFANTSEMAN

6TH MAY 2015.

THE CHAIRMAN
ETHICS REVIEW COMMITTEE
GHANA HEALTH SERVICE.

PERMISSION TO UNDERTAKE RESEARCH PROJECT

I hereby inform you that the hospital has given permission to Dr. Killian Boampong – Konam, to undertake his research project titled “Barriers to Disclosure of HIV Status to Sexual Partner in the Central Region, Ghana” as requested by the school of public health.



EMMANUEL K. GYAMFI
HOSPITAL ADMINISTRATOR

UNIVERSITY OF CAPE COAST
UNIVERSITY HEALTH SERVICES

Main: (03321) 35967/32447
Emergency: (03321) 33312
Students' Clinic: (03321) 31768
Tele-Fax: (03321) 35968



UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref:
Your Ref:

13th May, 2015

TO WHOM IT MAY CONCERN

RE: PERMISSION TO CONDUCT RESEARCH PROJECT
DR. KILLIAN BAOMPONG-KONAM

Your letter dated 4th February, 2015 on the above subject matter refers.

You are kindly informed that permission has been granted for you to collect data for your proposed research.

Thank you.

Administrato
UNIVERSITY HEALTH SERVICE
U.C.C.

ATTA YEBOAH-SARPONG
(HEALTH SERVICES ADM'TOR)

For: Director

WINNEBA MUNICIPAL HOSPITAL

In case of the reply the number and the date of this letter should be quoted.

My Ref. No. WMH- *PD/019/73*

Your Ref. No.

Tel: 0432 22017
Fax 0432-20923

E-mail: Winhosp_09@yahoo.com



GHANA HEALTH SERVICE
P. O. BOX 4
WINNEBA
CENTRAL REGION
GHANA.

13th February, 2015

**THE HEAD
SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA
LEGON**


**RE: INTRODUCTORY LETTER
DR. KILLIAN BOAMPONG-KONAM**

We write to inform you that, management of the facility has approved your request to conduct your research work in this facility.

Kindly report to Mrs. Mercy Andoh (Head of Family Planning and ART) to assist you in this direction.

Thank you and wish you well.

Thank you.


**MR. HAYFORD FREMPONG
PRIN. HEALTH SERVICE ADMINISTRATOR
FOR: MEDICAL SUPERINTENDENT**