

**HIV Status Disclosure to Sexual Partners and Partner Reactions to
Disclosure among Clients on Antiretroviral Treatment at Charlotte
Maxeke Johannesburg Academic Hospital**

By

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Declaration

I Beverley Masegodi Letsoalo hereby declare that the work presented in this dissertation titled "HIV status disclosure to sexual partners and partner reactions to disclosure among clients on antiretroviral treatment at Charlotte Maxeke Johannesburg Academic Hospital" and hereby submitted to the University of Limpopo, MEDUNSA campus for partial fulfilment of the degree of Masters in Public Health has not been previously submitted for any other degree or qualification at this or any other University, is my own work in design and execution, and that all the materials that I have used or quoted have been indicated and has been duly acknowledge by means of complete reference.

Beverley Masegodi Letsoalo

Signature

Date

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I would like to thank the almighty God for giving me the opportunity to conduct and complete this study and I give Him praise.

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Abstract

Background and introduction

Disclosure of HIV sero-status is critical in the control of the spread of HIV and research. To better understand the factors influencing disclosure will enhance the development of prevention interventions and ultimately lead to better control of the spread of the disease. However literature shows that the rates of disclosure are generally low and vary substantially in different populations.

Study purpose

To determine the prevalence, reasons for disclosure, partner reaction to disclosure, and intentions of disclosure to sexual partners among HIV positive adults receiving antiretroviral treatment.

Study design

Cross sectional survey was conducted with 400 adult patients aged 18 years and above, who receive ART, and have known their HIV status for six more than six months. Structured close ended self-administered questionnaire was used to collect data. The study participants were recruited from a wellness clinic of an academic hospital in the City of Johannesburg, Gauteng province between October and November 2012. Descriptive and inferential statistics were performed using STATA 10 for analysis. Pearson X^2 tests were used to determine variables associated with disclosure.

Results

A total of 400 HIV positive adults participated in the survey. There were slightly more female (n=229, 57%) than male (n=171, 43%), the mean age of participants was 39.9 years, (range 18-80 years). Almost half (n=176, 46%) had known of their HIV diagnosis for more than 5 years. High proportion (n=293, 73%) were sexually active three months prior to the survey, (n=250, 63%) knew their partner's HIV status, more than a third (n=145, 36.3%) had more than one sexual partner, (n=263, 73.5%) reported condom use, (n=261, 75%) disclosed to their partners. Gender, discussing HIV testing with sexual partner, knowing partner's HIV status, and living with partner were significantly associated with disclosure.

The most common cited reasons for disclosure were that they needed to protect their partner from being infected with HIV, and needed support from their partner. Partner reactions to disclosure included support, shock, and denial of the test results, blame, abandonment, violence, anger, and divorce.

The most cited reasons for nondisclosure were concerns that the partner might leave, partner might be afraid of catching HIV, partner might think they were unfaithful, partner might get angry, partner might hurt them physically and that partner might stop financial support.

Conclusion

The study concludes that the prevalence of disclosure to sexual partners among sexually active adults was high and that most respondents disclosed immediately after they were diagnosed with HIV. However, disclosure to multiple sexual partners was lower as compared to disclosure to the steady partner. Respondents disclosed to protect the partner from HIV infection and to receive support. Nondisclosure was mainly used to protect self from negative reactions from the partner.

Recommendations

Researchers and health care providers needs to take cognisant of the risk sexual behaviour and low condom use among HIV positive adults receiving ART. Secondary prevention efforts targeting risky sexual behaviour among HIV-positive persons need to receive greater attention.

List of abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
CBD	Central Business District
CD4	Cluster of Differentiation 4
HAART	Highly active antiretroviral therapy
HCT	HIV counselling and Testing
HIV	Human Immunodeficiency Virus
MTCT	Mother to Child Transmission
OR	Odds Ratio
PLWHA	People Living with HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission
SD	Standard Deviation
VCT	Voluntary Counselling and Testing

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Chapter 1: Introduction and Background

1.1 Introduction

As HIV becomes more of a chronic disease and people living with HIV and AIDS (PLWHA) live longer, disclosure of HIV status to sexual partners has become essential in the prevention, care, treatment and support for HIV infected people (WHO 2004). HIV disclosure to sexual partners is advocated because of its contribution to the reduction of the risk of HIV transmission and encourages preventive behaviours such as condom use (Deribe et al. 2008; Ndiaye et al. 2009). Furthermore, disclosure is an important public health strategy which motivates sexual partners to seek testing, change sexual behaviour, and facilitates access to prevention and health care services for PLWHA (WHO 2004). Disclosure also enables sexual partners to make informed reproductive health choices that may prevent unwanted pregnancies among HIV positive partners (Clarke et al. 2010; Medley et al. 2004). Garret al (2010) reports that the high disclosure rates to sexual partners have positive implications in the prevention of HIV transmission from women to their sexual partner and children.

A number of studies have documented that the rates of disclosure are generally low and vary substantially in different populations. In a review of 17 studies from developed countries and 15 from Africa, the rate of disclosure to sexual partners ranged from 16.7% to 86% (Kilewo et al. 2001; Medley et al. 2004). Studies done in South Africa also reported similarly low rates of disclosure, Sethosa and Peltzer (2005) found that only 36% of women in a rural sample had disclosed their HIV status to sexual partners five months after diagnosis. Although several reasons for not disclosing HIV to sexual partners have been reported, the most common reasons for nondisclosure were fears of abandonment, fears of verbal and physical abuse, fear of rejection and other forms of negative responses (Ssali et al. 2010). Furthermore, literature shows that disclosure of HIV status to sexual partners indeed pose a number of potential risks for the individual including loss of economic support, blame, and the disruption of family relationships (King et al. 2008). However, Amoran (2012) argues that the low disclosure rates are attributed to inadequate knowledge about ART treatment services and the nature of the disease in some study populations

1.2 Consequences of non-disclosure

Failure to disclose the HIV positive status to sexual partners could lead to unprotected sex, low, and inconsistent use of condoms among people living with HIV. Resulting in an increase in the risk of transmission of resistant HIV strain, re-infection with new strain, unwanted pregnancy, and mother to child transmission of HIV (Gari et al. 2010). Non-disclosure by HIV-positive pregnant women to partner presents potential barriers to preventing sexual transmission of HIV to partners and mother-to-child transmission through breastfeeding (Visser et al. 2008). According to Simbayi et al. (2007) HIV transmission risk for many HIV positive South Africans occur in the context of manual unawares of partner's status and the practice of not asking and not telling sexual partner about HIV testing. The lack of disclosure results in a limited ability to engage in preventive behaviours and to access support (Seid et al. 2012).

1.3 Problem Statement

Despite evidence of the positive effects of HIV disclosure, WHO (2004) estimates that only 52% of PLWHA disclose their status to their sexual partners in Africa. Disclosure to sexual partners is encouraged because it has the potential to increase the safety of subsequent sexual encounters with partners. The authors argue that open communication is likely to facilitate safer sexual practices (Simoni and Pantalone 2004). According to Ssali et al. (2010) identifying reasons PLWHA may or may not decide to disclose their HIV status is crucial in developing interventions to promote safe disclosure decisions and secondary prevention of HIV. However, data on disclosure of HIV status among patients on ART is limited. Therefore this study aims to fill the gap on data relating to disclosure of HIV status to sexual partners among patients on ART.

1.4 Aim of the study

To determine the prevalence and reasons for disclosure of HIV status to sexual partners, and the reactions of partners to disclosure among clients on antiretroviral treatment at the Charlotte Maxeke Johannesburg Academic Hospital.

1.5 Research Questions

1. What is the prevalence of HIV status disclosure to sexual partners among clients on ART?
2. What are the reasons for disclosure and non-disclosure of HIV status to sexual partners?
3. What are the reactions of sexual partners to disclosure?

1.6 Study Objectives

1. To determine the prevalence of HIV status disclosure to sexual partners among clients on ART.
2. To determine the reasons for disclosure and non-disclosure of HIV status to sexual partners.
3. To determine the reaction of sexual partners to disclosure.

1.7 Study significance

The findings from this study can assist healthcare providers to understand the factors that influence disclosure of HIV status to sexual partners among adults on ART. Given the importance of disclosure in prevention of new infections and reinfection, the findings of the study will allow health care providers in public health facilities to develop interventions to support disclosure to sexual partners.

The results of this study will also bridge the existing gap in the literature on disclosure of HIV status to sexual partners in South Africa almost ten years after the roll out of ART to adults.

Furthermore, the study will contribute to answering some of the questions related to disclosure of the HIV status to sexual partners by highlighting factors associated with disclosure.

It is envisaged that the study findings will inform socially and culturally appropriate disclosure interventions to assist health care providers to counsel HIV positive adults to disclose early after diagnosis to prevent the further spread of HIV.

Chapter 2: Literature review

2.1 Introduction

This chapter provides a critical analysis of the literature on disclosure of HIV positive status to sexual partners. The chapter begins with an overview and prevalence of HIV status disclosure to sexual partners. Then, the major reasons for disclosure and nondisclosure of HIV status to sexual partners, the reaction of the partners to disclosure, and the factors associated with disclosure are reviewed. The review of the literature presented here, represents findings mostly from developing countries similar to South Africa. The context of disclosure to sexual partners in other African countries is relevant and appropriate for a South African setting.

Disclosure of HIV status among sexual partners remains an important tool for the prevention of new infections and early initiation of treatment for the HIV-positive individuals' regular sexual partners (Ndiaye et al. 2009). However, data show that up to one third of individuals diagnosed with HIV infection continue to have unprotected sex, at times without informing their sexual partners who may be of HIV negative or unknown HIV status (Simoni et al. 2004). Public health interventions have focused on encouraging HIV positive individuals to disclose their status to their partners assuming that disclosure will increase the safety of subsequent sexual activities with informed partners. According to Brou et al. (2007) individuals who disclose their status to their sexual partners are in a better position in terms of reproductive choices as well as psychosocial support. In addition, disclosure facilitates behaviours that may improve the management of HIV, women who disclose their status to their partners may be more likely to participate in prevention of mother to child transmission (PMTCT) programs.

2.2 Prevalence of HIV disclosure

More than a decade ago, WHO (2003) reported that disclosure of HIV status to sexual partners was occurring less in developing countries than in the developed world. The rate of disclosure at the time was 49% and 79% respectively. Current data show high disclosure rates to sexual partners. Seid et al. (2012) reported that 93.1% of participants had disclosed their HIV status to their sexual partners in a study conducted in Ethiopia. The disclosure

prevalence in this study was similar to a previous study conducted by Deribe et al. (2008) in Ethiopia. According to Seid et al. (2012) the slight differences in the prevalence might be due to the difference in population characteristics as this study was conducted in a clinical setting, whereas some of the other studies were conducted in community setting, and some, on women only.

Researchers argue that the high rates of disclosure might be influenced by the counselling received by respondents on issues pertaining to disclosure. Furthermore, some of the respondents who disclose are on ART therapy whereby disclosure is part and parcel of ART adherence strategy. While other respondents have known their status for quite some time and they have accepted the HIV positive status and it was easy for them to disclose (Deribe et al. 2008; Nkya et al. 2010). One other reason for high disclosure rates according to (Gari et al. 2010) is that high disclosure occurs more among respondents from urban areas where HIV/AIDS information, care, and support services are accessible. On the other hand, Amoran (2012) reports a low disclosure prevalence of 50.9% among HIV positive respondents in his study. The author attributes the low disclosure rate to the fact that respondents in the study were relatively recently diagnosed with HIV since HAART was introduced about one year prior to the survey. The lower rate of disclosure in this study may also be attributed to the fact that there is still an inadequate knowledge about treatment services and nature of the disease in the study population

2.3 Reasons for non-disclosure

The main reason for non-disclosure among sexual partners is fear of partner's negative reactions to disclosure (Vu et al. 2012). Participants in a Tanzanian study, reported that before they disclosed to their sexual partners, children, relatives and friends they thought about how to support themselves and their children once they got divorced or abandoned (Nkya et al. 2010). Several researchers have reported on various reasons for non-disclosure among sexual partners. The main reasons include fear of separation or divorce, fear of being abandoned, and fear of blame. Women also mentioned that their partner might get angry, and they feared verbal abuse and or physical violence from their partners (Gari et al. 2010; Greeff et al. 2008; Rujumba et al. 2012). While young women may fear that disclosure would mean an end of their relationships, women in polygamous relationships feared that their partners would abandon them and shift to co-wives, which would lead to loss of support for the

women and their children (Rujumba et al. 2012; Seid et al. 2012). Women feared that their male partner would leave the relationship, and that their children would have to grow up without a father. Women who feared break-up of the relationship relied on their sexual partners financially and thus were fearful of disclosing their HIV status to their partners, due to concerns that disclosure might result in a loss of the resources provided by the partner (Deribe et al. 2008).

Other reasons given for nondisclosure were not wanting to worry their sexual partners, not wanting to upset their sexual partner, and fear that their partner might be afraid of catching HIV from them (Deribe et al. 2008; Ssali et al. 2010). The concern for the partners is motivated by the closeness to sexual partners where participants' fears of upsetting the partners surpass disclosure (Ssali et al. 2010; Vu et al. 2012). However, Deribe et al. (2008) argue that while women feared violent retribution and socio-economic consequences for disclosure, men were characterised by a fear for their partners and of the exposure of infidelity. According to Deribe et al. (2008) men's fear about disclosure related to their concern of gossiping about their past sexual behaviour, and fear that their partner might not cope well with the news.

Literature shows that HIV-positive women feel that nondisclosure helps to protect their sexual partners from stress and worry. Some HIV-positive women reported that they do not disclose to their partners because they would associate HIV-positivity to quickening their death. So non-disclosure of HIV positive status is often associated with not wanting to bother the spouse (Rujumba et al. 2012). These findings are in contrast with findings reported by Edwards-Jackson et al. (2012) that non-disclosure is also a result of lack of feelings of personal responsibility to disclose if protected sex is planned. The authors argue that lack of trust or intimacy with sexual partner may deter disclosure to sexual partners. Fear of rejection, discrimination and stigma, and fear of rumour mongering were mentioned as main reasons for non-disclosure among sexual partners in several studies (Gari et al. 2010; Kadowa and Nuwaha 2009; Vu et al. 2012). While data show that concerns about public ignorance of the disease and fear of accusation of infidelity or being considered unfaithful was also a deterrent for disclosure among sexual partners (Gari et al. 2010; Kadowa and Nuwaha 2009). According to Vu et al. (2012) HIV related stigma is an important barrier in disclosing HIV status especially among steady partners. The fear of losing or damaging a steady relationship diminishes the likelihood of disclosing to a steady partner.

Another non-common reported reason for non-disclosure is lack of self-efficacy for disclosure or not knowing how to disclose (Mlambo and Peltzer 2011). According to Sullivan et al. (2010) women who believed in their ability to know when it was safe to share their diagnosis with sexual partners were more likely to report disclosing. Furthermore, lack of time for discussion and inaccessibility to the sexual partners was also reported as reasons for non-disclosure in other studies (Deribe et al. 2008; Ssali et al. 2010). While Mlambo and Peltzer (2011) reported that male refusal to share results and males postponement to go for HIV testing were the reasons for non-disclosure in their qualitative study.

2.4 Reasons for disclosure

Reasons for disclosure differed depending on the social group of the disclosure recipient (Ssali et al. 2010). The main reasons mentioned for disclosure were multiple and included; disclosing to get financial and social support from the partner, disclosing to get treatment, and wanting the partner to also undertake the test (Kadowa and Nuwaha 2009). In addition, it was found that the promotion of HIV prevention or the desire to protect the person from HIV was mostly associated with disclosing to spouse or partner and friends (Seid et al. 2012). For female respondents who disclose, disclosure was associated with HIV prevention. Respondents disclosed so that the partner could consider using condoms (Ssali et al. 2010). Women also disclose their in order to receive supports in adhering to interventions in PMTCT programs (Gari et al. 2010). On the other hand, disclosure by male respondents was driven by the desire to protect their female spouse from HIV infection so that she would be there to look after the children in case the male discloser died (Ssali et al. 2010).

2.5 Partner reaction to disclosure

Although literature show that fear of violence is mentioned by women as a barrier to disclosure in most studies (Medley et al. 2004). In reality women experienced low levels of adverse consequences after disclosure (Visser et al. 2008). Similarly Seid et al. (2012) reported that disclosure in their study was followed by positive outcomes for most of the respondents. In a study conducted by Deribe et al. (2008), of the 127 respondents who anticipated a negative partner reaction only 13.4% faced adverse outcomes of disclosure, and the rest (86.6%) received support and understanding from their partners. In addition, the most commonly cited reason for non-disclosure was fear of partner's reaction; yet, only 5% of the

participants reported any negative partner's reaction. The majority of the disclosures received support and understanding from their partners. However, the absence of social security in most African countries make women dependent on their sexual partners, therefore women may choose not to disclose their HIV status in order to benefit from their partners support (Medley et al. 2004). According to Rujumba et al. (2012) HIV-positive women, who disclosed their HIV status to partners in their study, reported positive responses as well as encouragement and support from their sexual partners. In addition, male partners tested for HIV and some were receiving HIV treatment. However, Dunkle and Jewkes (2007) argue that there is evidence which suggests that HIV positive women who disclose their status to a spouse could suffer from domestic violence. Where cases of negative reactions occurred following disclosure to sexual partners, the most common reactions were separation or divorce, being blamed for the infection, and domestic violence.

2.6 Factors associated with disclosure

Disclose of HIV status to sexual partners is influenced by multiple factors such as education, the age of sexual partners, nature of the relationship, the duration of the relationship, culture, socioeconomic status, ethnic group, discussion of HIV and VCT prior to test, number of partners and partner involvement in the test (Medley et al. 2004).

2.6.1 Relationship status

Literature from developing countries shows that disclosure to sexual partners is associated with the type of relationship or sexual partner. Respondents who test HIV positive were found to be more likely to disclose to a steady sexual partner than casual sex partners (Nkya et al. 2010; Vu et al. 2012). Non-disclosure to casual partners may be due to a lower sense of responsibility to casual sex partners (Deribe et al. 2008; Rujumba et al. 2012).

Furthermore, respondents who were married, disclosed their HIV status to their sexual partners significantly more than single and never married participants (A Moran 2012; Kadowa and Nuwaha 2009). Literature shows that married women are more likely to disclose their HIV positive status to sexual partners. This could be due to the strength of their relationship, feelings of responsibility, and the confidence they have on each other, and the ability to communicate (Gari et al. 2010; Vu et al. 2012). Vu et al. (2012) reported that

disclosure also occurs more frequently among partners in steady relationships than with respondents in casual relationships. The cohabitation status of the relationship was also found to be associated with disclosure to sexual partners. Respondents who were in a cohabitation relationship were more likely to disclose their HIV status to sexual partners than respondents who live alone (Vu et al. 2012). Deribe et al. (2008) also reported on the association of the living arrangement of respondents with disclosure to sexual partners. Respondents living in the same house with their partner were more likely to disclose their result than those who do not live together. While Amoran (2012) found that disclosure to sexual partners was higher among respondents in monogamous family type when compared with the polygamous families.

2.6.2 Multiple sexual partners

Having multiple sexual partners was found to be associated with non-disclosure of HIV status to sexual partners. Several studies reported that people who have more than one main sexual partner were considerably less likely to disclose their status. This behaviour was common amongst both male and female HIV positive people (Deribe et al. 2008; Kadowa and Nuwaha 2009; Simbayi et al. 2007).

2.6.3 Time since diagnosis

Time since diagnosis was also reported to be associated with disclosure to sexual partners. Several studies have documented that respondents who had known of their status for about a year were more likely to disclose to sexual partners than respondents who were recently diagnosed (Kadowa and Nuwaha 2009; Nkya et al. 2010; Rujumba et al. 2012). Other studies report that illness severity and length of time since HIV diagnosis were positively correlated to disclosure (Amoran 2012). Furthermore, Amoran (2012) argue that the fact that respondents take long time before disclosing their HIV positive status to sexual partners may lead to difficulty in negotiating safer sex and the risk reduction plan.

2.6.4 Time on ART

Furthermore, literature shows that receiving ART was associated with HIV status disclosure. Respondents who were on ART were more likely to disclose to sexual partners than respondents who were not on ART (Kadowa and Nuwaha 2009). According to Sullivan et al.

(2010) with the advent of ART, PLWH are living longer with less overt disease manifestations than previously observed.

2.6.5 Discussing HIV testing

Discussing with partner about undertaking the HIV test prior to HIV testing is significantly associated with disclosure. Several studies report that respondents who reported prior discussion about HIV testing were more likely to disclose their HIV status to their partners than those who reported not having a prior discussion about HIV (Deribe et al. 2008; Kadowa and Nuwaha 2009). According to Seid et al. (2012) communication among sexual partners prior to HIV testing is a key point in that it might help individuals to anticipate a partner's reaction to disclosure.

2.6.6 Partners HIV status

Knowledge of the HIV status of the partner was strongly associated with disclosure of HIV status to sexual partners. Respondents who know the HIV status of their partners were more likely to disclose their status to their sexual partners than respondents who did not know their partner's status (Amoran 2012; Deribe et al. 2008; Seid et al. 2012; Simbayi et al. 2007; Vu et al. 2012). Respondents are more likely to disclose to a partner whom they know is HIV-positive than to an HIV- negative or unknown sero-status partner (Amoran 2012).

2.6.7 Gender

Gender was also found to be one of the factors influencing HIV status disclosure (Deribe et al. 2008). Disclosure, especially by the males to the female spouse was often driven by the desire to protect the spouse from HIV infection, so that she would be able to look after the children in the case the male dies. Nkya et al. (2010) argue that males do not feel obligated to disclose their HIV status to female partners. On the other hand female partner's disclosure is associated with HIV prevention, women disclose so that their partners could consider using condoms (Ssali et al. 2010). While non-disclosure of HIV status to partners was influenced by women's economic dependency on men, women's roles as mothers caring for children, and polygamy as a form of marital relationship (Brou et al. 2007; Rujumba et al. 2012).

2.6.8 Other demographics

The level of education was also associated with disclosure of HIV status to sexual partners in several studies. Amoran (2012) found that women with higher education were more likely to disclose their HIV status to their sexual partners than women who are illiterate.

Age was also associated with disclosure of HIV status, Kadowa and Nuwaha (2009) found that respondents who were more than 25 years of age were more likely to disclose to sexual partners than respondents younger than 25 years. Amoran (2012) and Clarke et al. (2010) also found that younger respondents were less likely to disclose their HIV status to sexual partners than older respondents. Wong et al. (2009) concern is that younger people are already likely to be at high risk for HIV transmission, and thus, are in even greater danger because they are less likely to disclose their HIV status. The socio-economic status of respondents was also associated with disclosure. Disclosure to sexual partner was related to higher socioeconomic assets while individuals who did not disclose their HIV status tended to be low in socioeconomic assets brackets (Wong et al. 2009).

2.7 Disclosure and condom use

Literature show contrasting views on the association of disclosure of HIV status to sexual partners and condom used. Seid et al. (2012) found that respondents who disclosed their HIV status to sexual partners were more likely to have used condoms regularly than respondents those who did not disclose. In contrast Grau et al. (2011) reported that disclosure was not associated with increased condom use in their study, instead, disclosure to potentially negative partners was associated with less condom use. Sullivan et al. (2010) also reported a negative association between disclosure to sexual partners and condom use. In their study, condom use was reported more with sexual partners to whom a disclosure was not made (78.8%), compared to partners who did receive a disclosure (53.5%). According to Simbayi et al. (2007) the relationship between inconsistency condom use and not disclosing HIV status to sexual partners is most apparent when partners were of unknown HIV status. In contrast Deribe et al. (2008) and Wong et al. (2009) reported that participants who never disclosed their status were more likely to abstain from having sex than individuals who disclosed their status to their sexual partners.

2.8 Disclosure to others

Literature shows that in most studies on disclosure to sexual partners, respondents also report on disclosure to other people including close families, friends, work colleagues, priests and other distant relatives. According to Clarke et al. (2010) disclosure of HIV status to family members is significantly associated with respondents' perception of family support.

Similarly, (Ssali et al. 2010) reports that disclosure for the purpose of receiving support is the most prevalent as a reason cited by respondents who disclosed to family members. Often the reason for disclosure of HIV status to family members is to explain obvious changes from the signs and symptoms of a HIV infection (Ssali et al. 2010). Literature further shows that discussing things about HIV testing and HIV test result with the family, facilitated disclosure of HIV positive result to sexual partner (Seid et al. 2012). However, disclosure of HIV positive status to family members was not significantly associated with gender, age, education level, employment or sexual orientation (Clarke et al. 2010).

Literature further shows that disclosure to families differs across respondents who disclose. For example, older women may be more likely to disclose to children because they are more likely to have children who are old enough to disclose to, and who could understand its meaning and circumstances (Ssali et al. 2010). Furthermore, women living with extended families were more likely not to disclose their HIV status. Disclosure in this case is motivated by the desire to gain support mostly associated with disclosure to family members (Mucheto et al. 2011).

Chapter 3: Methods and Materials

3.1 Introduction

This chapter discusses the research methodological used to conduct the study. Aspects of the methodology such as the research design, sampling technique, study setting and population in which the study was conducted are discussed. Data collection methods, measures of validity and reliability, and data analysis are also presented. Lastly, ethical considerations undertaken during the study are discussed. The study aimed to determine the prevalence and reasons for disclosure of HIV status to sexual partners, and the reactions of partners to disclosure among clients on ART in a public hospital in Gauteng province.

3.2 Research Design

This was a descriptive study conducted during October and November 2012 in one of the academic hospital in Gauteng province, South Africa. The study used structured close ended questionnaire to determine the prevalence of disclosure among HIV positive adults.

3.3 Study setting and population

The study was conducted at Charlotte Maxeke Johannesburg Academic hospital at the HIV adult wellness clinic. The hospital is located in the City of Johannesburg Municipality in Gauteng Province. The hospital serves patients across the City of Johannesburg's suburbs, informal settlements, and the CBD. It offers inpatient and specialist outpatient's services mainly for level 3 and level 2. The wellness clinic runs for five days a week, from 7h00 am to 17h00 pm, and provides HCT services, TB service, CD4 count testing, wellness program, on site pharmacy, post exposure prophylaxis, and HIV education to clients. The clinic sees adult patients aged from 18 years and above. There is an ART clinic dedicated to HIV infected children and adolescents from birth to 17 years. The total number of clients that are seen per day in the wellness clinic varies between 100 and 150.

The study population comprised of HIV positive adult patients receiving ART at the wellness clinic.

3.4 Sampling

The sample size was calculated using complete survey system software solution.

$$\text{Sample size} = z^2 \times p \times \frac{(1-p)}{C^2}$$

Where z value was 1.96 for confidence level at 95% (standard value of 1.96), percentage picking choice P was 50%, expressed as a decimal; 0,5 was used for sample size needed, C being the confidence interval, also expressed as a decimal 0,05 ± 5 for this study.

$$\begin{aligned} \text{Estimated sample size} &= z^2 \times p \times \frac{(1-p)}{C^2} \\ &= 1.96^2 \times 0.5 \times \frac{(0.5)}{0.05^2} \\ &= 3.841 \times 0.5 \times 200 \\ &= 384 \end{aligned}$$

Convenience sampling was used to select patients. Patients accessing the clinic for routine follow up who meet the inclusion criteria were recruited to participate in the study. Convenience sampling involves drawing samples that are both easily accessible and willing to participate in a study. Although this definition emphasizes ready availability, some convenience samples are more readily accessible than others, so even if a sample is convenient, some amount of effort will likely be involved in reaching and recruiting participants from that sample as was the case in this study.

3.5 Inclusion and exclusion criteria

Adult patients aged 18 years and above, who receive ART, and have known their HIV status for six months and above. The study excluded adult patients who were recently diagnosed or have known their HIV status for less than 6 months, as well as very ill patients.

3.6 Data collection

Self-administered questionnaire with close ended questions was used to collect data. The questionnaire was developed in English and translated into Setswana and IsiZulu. Besides English, these are the two languages commonly spoken by the participants in the study setting and across the province. The tool was developed by the researcher with inputs from literature on disclosure to sexual partners. The questionnaire captures participants' demographic data, HIV testing history, sexual behavior, disclosure to sexual partners, partners reaction to disclosure, reasons for non-disclosure, and intentions to disclose.

Participants were recruited during their routine visit to the clinic. Recruitment was done in the mornings while participants await their turns to consult the doctor and or collect their medications. This was done in order to cause minimal disruption to consultation and other clinic related activities. The study was introduced to the clients by the researcher who was also responsible for data collection, a trained research assistant assisted with data collection. The researcher and research assistant distributed the questionnaires and administered the informed consent to participants who volunteered to participate in the study. The researcher and the research assistant were available to assist participants who had low literacy and could not read and write. There were very few participants who could not read or write. However, the presence of the researcher and the research assistant was a measure to ensure data completion and quality. One of the lessons learned was that participants did not necessarily like writing, and they mostly request the researcher to assist with completion of the questionnaire. One of the counseling rooms was used for data collection to ensure participants' privacy and confidentiality. Data collection was conducted over a period of two months (October to November 2012).

3.7 Data Analysis

Data was captured into Microsoft Excel 2007 spread sheet, cleaned and re-entered as a raw data. The data was subsequently cleaned, coded and validated. The coded data was then imported into STATA 10 for analysis. Descriptive statistics were used to summarize data and to calculate frequencies for the socio demographic variables like age, gender, marital status, level of education, and employment status. Descriptive statistics were also used to compute HIV related information including time since diagnosis of HIV, time on ART, discussing HIV testing with partner, and disclosure of HIV status to partner. The sexual behaviour of participants was also computed using descriptive statistics, this included number of sexual partners and condom use. T tests were used to calculate and interpret the mean age of disclosed and non-disclosed participants, the mean age of participants who used condoms and those who did not use condoms as well as the mean age of participants who had one sexual partner and those who had more than one sexual partner. Pearson X^2 tests were used to determine the socio demographic, the HIV related variables as well as behaviour variables associated with disclosure of HIV to sexual partners.

3.8 Reliability and Validity

Validity and reliability of the questionnaire was ensured through standardization of the questions to achieve uniformity in responses and minimize measurement bias.

To ensure validity of the questionnaire, the tool was pretested with 10 participants on ART in the study setting to determine the clarity of questions, their relevance, completeness, and the time required to complete the questionnaire. Pre testing highlighted participants' interpretation of the questions in the tool and assisted the researcher to identify unclear or ambiguous questions. The results of the pre-test assisted the researcher to make corrections and adjustments to the questionnaire to ensure that the questions were well understood by the participants. Participants who participated in the pilot study were excluded from the main study and their data did not form part of the final analysis of the study. The questionnaire was also translated into IsiZulu and Setswana to further enhance participants' understanding of the questions. The research assistant was also trained to ensure that she understands the contents of the questionnaire and administer it in a consistent manner.

The following strategies were employed in order to increase the reliability of the study: The researcher verified that questionnaires are completed after data collection. Daily checking of data for completeness, accuracy, clarity and consistency was done. Volunteer bias was minimized by increasing the sample size to 400 and keeping the questionnaire anonymous. Anonymity also minimized information bias where the respondents may give socially acceptable responses.

3.9 Ethical consideration

Ethical clearance for the study was obtained from the University of Limpopo, Medunsa Research Ethics Committee (MREC) before the study commenced. Permission to conduct the study was obtained from the hospital superintendent of Charlotte Maxeke Johannesburg Academic hospital.

Written informed consent was obtained from individual participants before data collection. A patient information form, including information on confidentiality and anonymity was used in seeking informed consent from individual participants after explaining thoroughly the purpose, objectives, procedures, and method of the study to them. The participants were informed that the information given will be treated with confidentiality, and that the data collected will only be used for the stated purpose of the research. A private room was used

when participants were responding to the questionnaire to ensure their privacy. To ensure anonymity, participants were informed not to write their names on the questionnaire. Furthermore, participants were informed that they were free to withdraw from the study at any point if they so wished to because participation is voluntary. All participants were recruited individually for the study before or after they have received their routine care in order to prevent disruptions in the provision of services in the wellness clinic.

Chapter 4: Results

4.1 Introduction

This chapter presents the results of data collected through quantitative methods among 400 HIV positive adults. The first section of this chapter presents the demographic profile of the participants. In the second section, the HIV related information of the participants is presented. Lastly, disclosure related information including reasons for disclosure and partner reaction to disclosure is also presented.

4.2 Socio-demographic profile of participants

4.2.1 The study recruited both male and female participants and both genders had an equal opportunity to participate. The gender distribution of the study participants is shown below in percentages.

Figure 1: Gender distribution of participants (n=400)

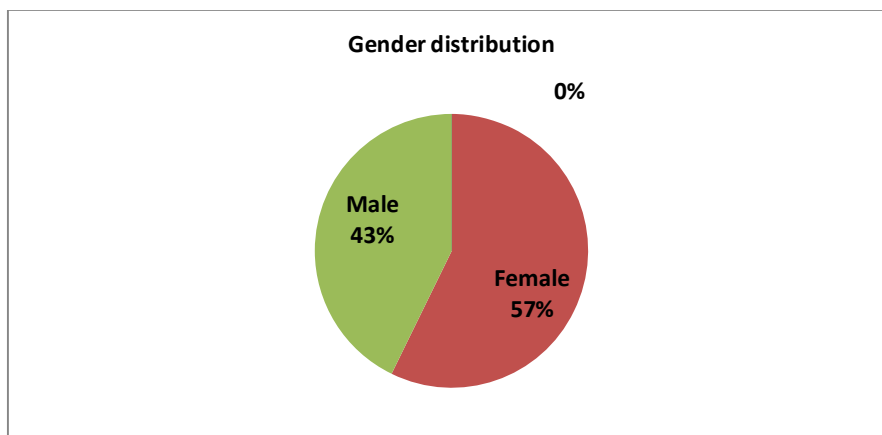


Figure 1 shows the gender distribution of the participants in the study. The result show that there were more female than male participants in this study with female representing 229 (57%) participants and male representing 171 (43%) of participants.

4.2.2. Participants were asked to indicate their ages in years. Participants aged 18 years and above had an equal opportunity to participate in the study. Participants' ages were categorized in five groups as presented in figure 2.

Figure 2: Age distribution of participants

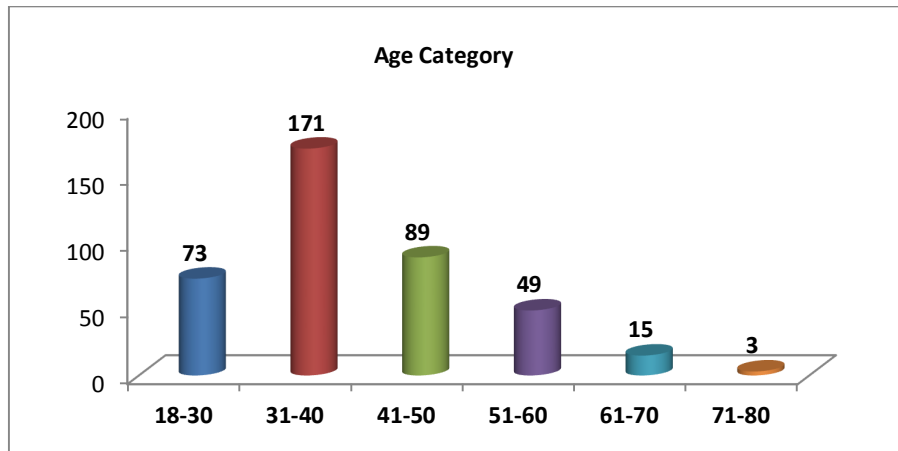


Figure 2 shows the age distribution of the participants. The age group between 31-40 years are in the majority 171 (42%) in the study, 89 (22%) were in the age group 41-50 years, 73 (18%) were in the age group 18-30 years, 49 (12%) were in age group 51-60 years, 15 (3.7%) were in the age group 61-70 years, and 3(0.7%) were in the age group 71-80 years. The mean age of participants was 39.9 with standard deviation (SD=10.8 years).

4.2.3 Participants also provide information on their marital status as shown in the figure below.

Figure 3: Marital status of the participants

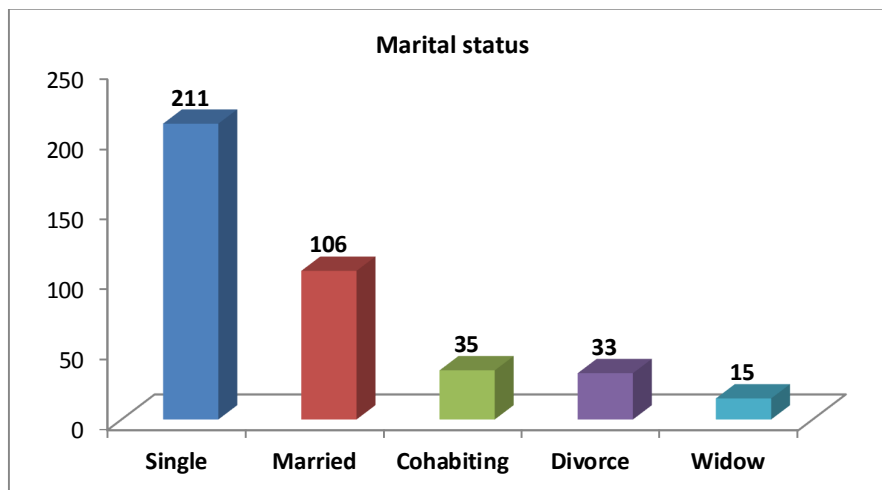


Figure 3 shows the marital status of the participants. The results show that more than half 211 (52.8%) were single, 102 (26.5%) were married, 35 (8.8%) were cohabiting, 33 (8.3%) were widowed, and 15 (3.8%) were divorced.

4.2.4 Participants also provide information on their level of educational. The level of educational was divided into four categories which are: no schooling, primary school, secondary school, and tertiary as presented in figure 4.

Figure 4: level of Education of the participants

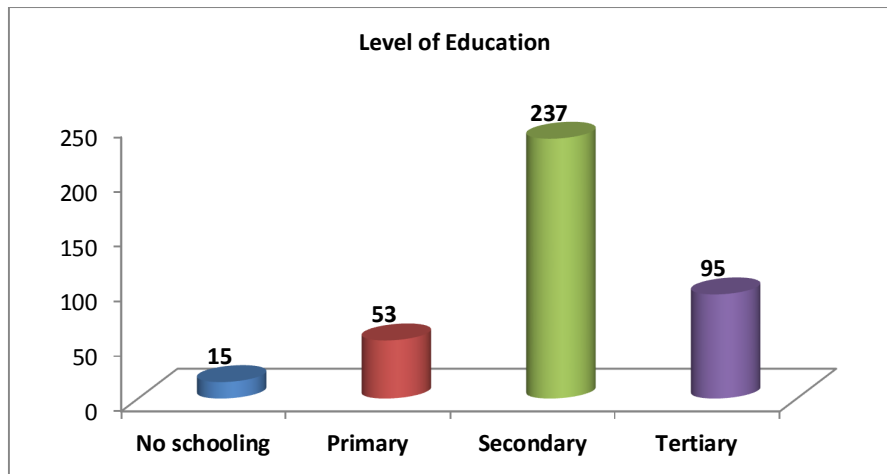


Figure 4 shows the level of education of the participants. The results show that more than half 237 (59.3%) had a secondary education, 15 (3.8%) did not attend school, 53 (13.8%) had primary education, and 95 (23.8%) had tertiary education.

4.2.5 Participants also provided information on their employment status. The employment status of the participants is shown in the figure 5 below.

Figure 5: Participants' employment status

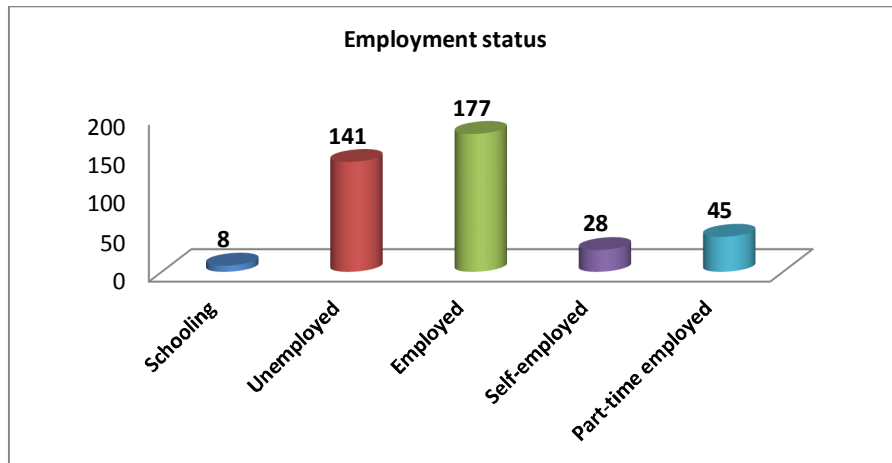


Figure 5 shows the employment status of the participants. The results show that the majority 177 (44.4%) were employed, 141 (35.3%) were unemployed, 45 (11.3%) were part-time employed, 28 (7.0%) were self-employed, and 8 (2.0%) were schooling.

4.2.6 Participants were asked to give information on their racial status. The racial status result of the participants is shown in figure 6.

Figure 6: Racial distribution of the participants

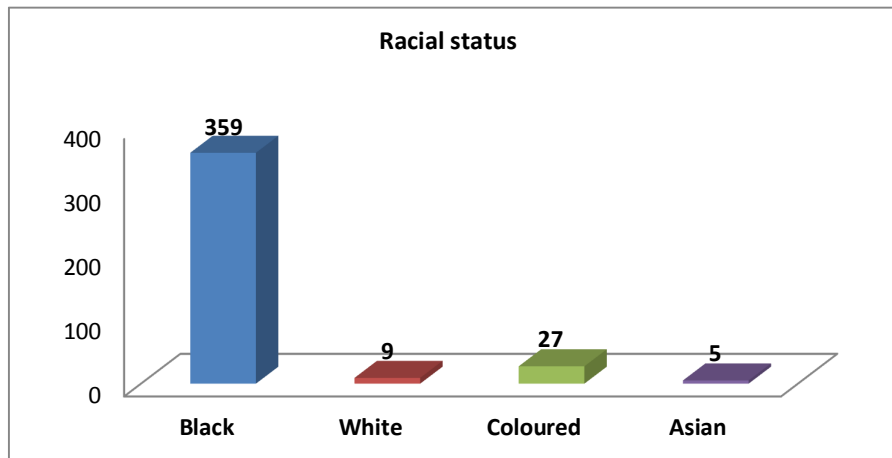


Figure 6 shows the racial distribution of the participants. The majority 359 (89.8%) of participants were black, 27 (6.8%) were coloured, 9 (6.8%) were white, and 5 (1.3 %) were Asians.

4.2.7 Participants were asked to give information on their religious status as presented in figure 7 below.

Figure 7: Religious status of the participants

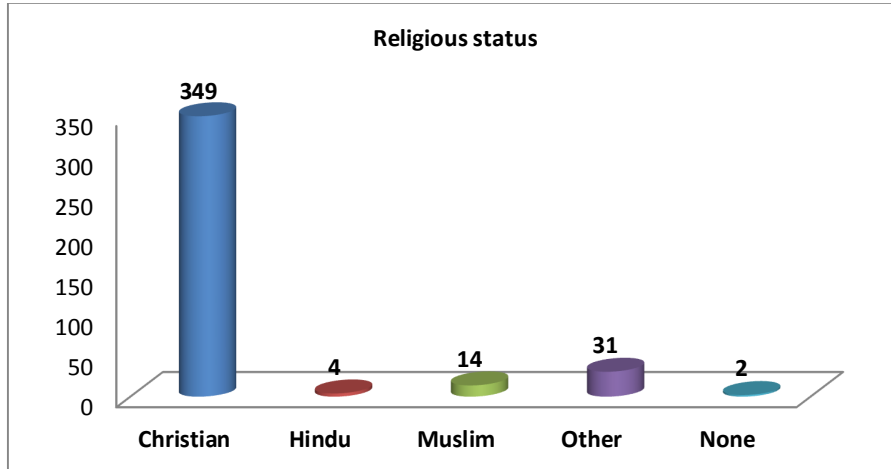


Figure 7 shows that most 349 (87.3%) participants in this study were Christians, 14 (3.5%) were Muslim, 4 (1.0%) were Hindu, 31 (7.8%) reported that they belonged to other religions not listed in the questionnaire, while 2 (0.5%) did not belong to any religion.

4.3 HIV related information of the study participants

4.3.1 Participants were asked whether they have discussed HIV testing with their partners before undertaking the HIV test. Figure 8 below shows the response of the participants in percentage.

Figure 8: Discussing HIV testing with partner before testing

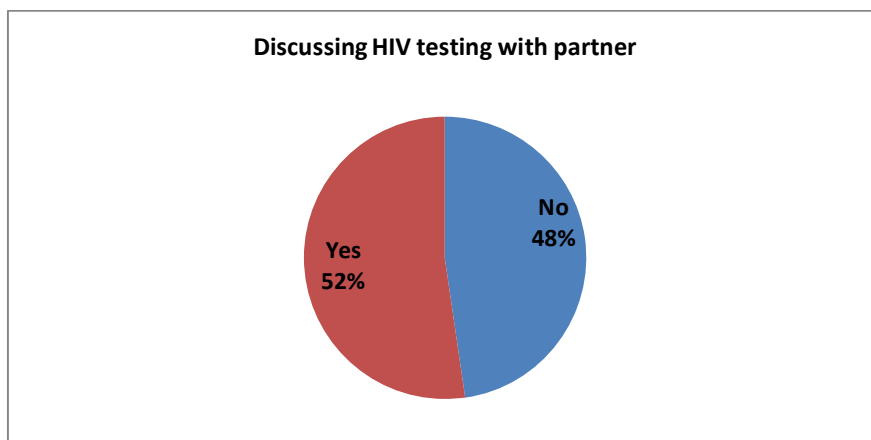


Figure 8 present participants response to discussing HIV testing with partners before testing. The results show that 209 (52.3 %) reported that they had discussed HIV testing with their partner before testing as compared to 191(47, 8%) who did not discuss HIV testing with partners.

4.3.2 Participants were asked for their reasons for HIV testing. This question was open ended and participants provided different reasons for testing. The reasons for testing were quantified for analysis. Participants responses are presented in Figure 9 below.

Figure 9: Reasons of HIV testing

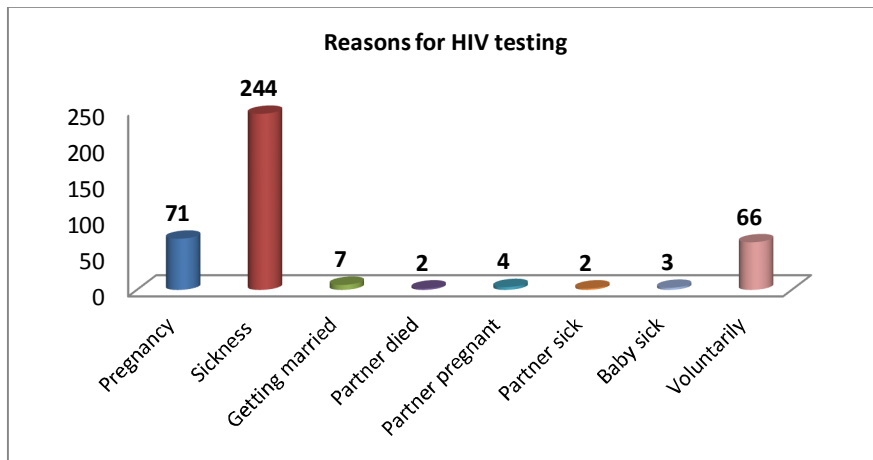


Figure 9 shows participants reasons for HIV testing. The majority 244 (61.2%) tested because they were sick, 71 (17.8%) were pregnant at the time of testing, 66 (16.5%) tested voluntarily, 7 (1.8%) were getting married, 2 (0.5%) tested because their partners died, 4 (1.0%) tested because their partners were pregnant, 2 (0.5%) tested because their partners were sick, and 3 (0.8%) tested because they had a sick baby.

4.3.3 Participants were asked to provide information on the length of time they knew about their HIV status. Their responses are presented in figure 10 below.

Figure 10: Length of time participants had known about the HIV Status

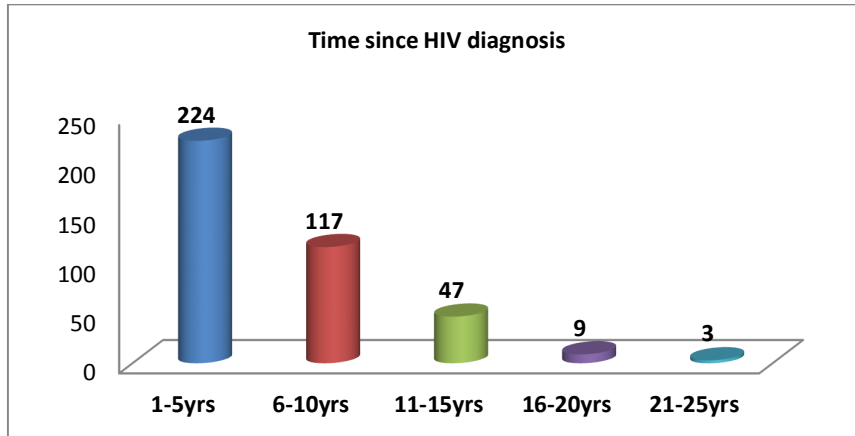


Figure 10 shows the length of time since diagnosis, 224 (56 %) of the participants had known of their HIV status for 1-5 years, 117 (29.25%) had known for of their HIV status for 6-10 years, 47 (11.75%) had known for 11-15 years, 9 (2.25%) had known for 16-20 years, 3 (0.75%) had known of their HIV status for 21-25 years.

4.3.4 Participants were asked to indicate if they knew their partners' HIV status, the results are shown in figure 11.

Figure 11: Distribution of participants who knew partner HIV status

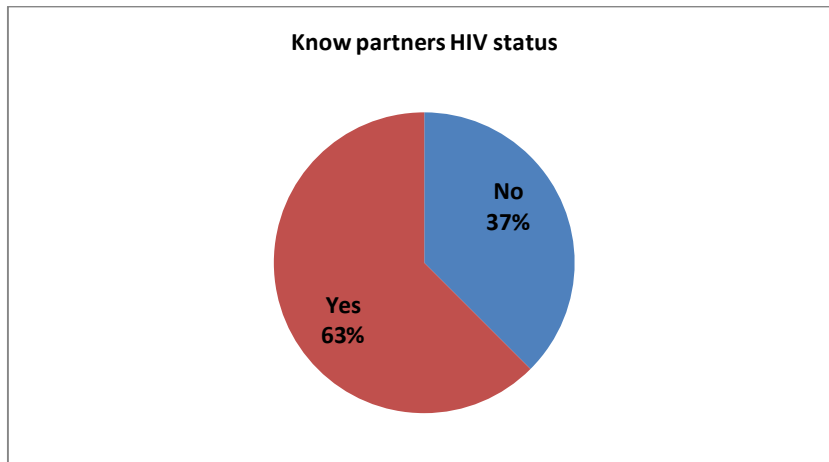


Figure 11 shows that 250 (63%) of the participants knew their partners' HIV status as compared to 150 (37%) participants who did not know their partners' HIV status.

4.3.5 Participants who knew their partners' HIV status were asked to indicate whether their partners were HIV positive or negative. The results are shown in figure 12 below.

Figure 12: Partners' HIV status

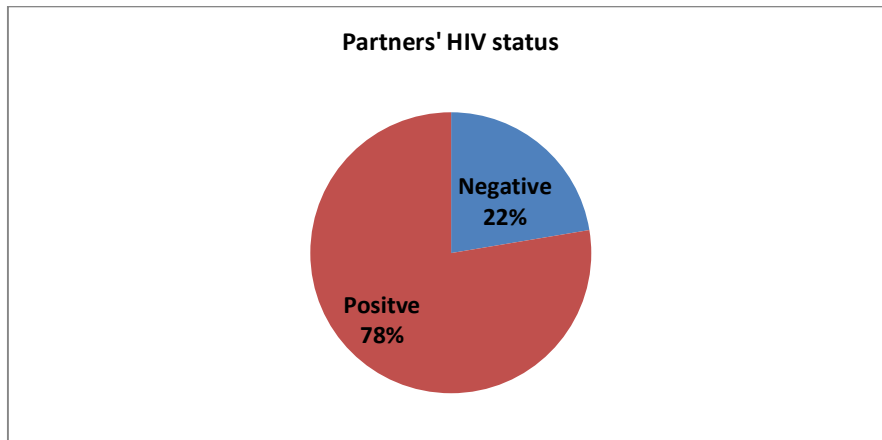


Figure 12 shows the distribution of participants who knew their partners' status, 194 (78 %) reported that their partners were HIV positive while 56 (22 %) reported that their partners were HIV negative.

4.3.6 Participants were asked to provide information regarding the time they have been on ART, the results are shown in figure 13.

Figure 13: Length of time participants have been on antiretroviral therapy

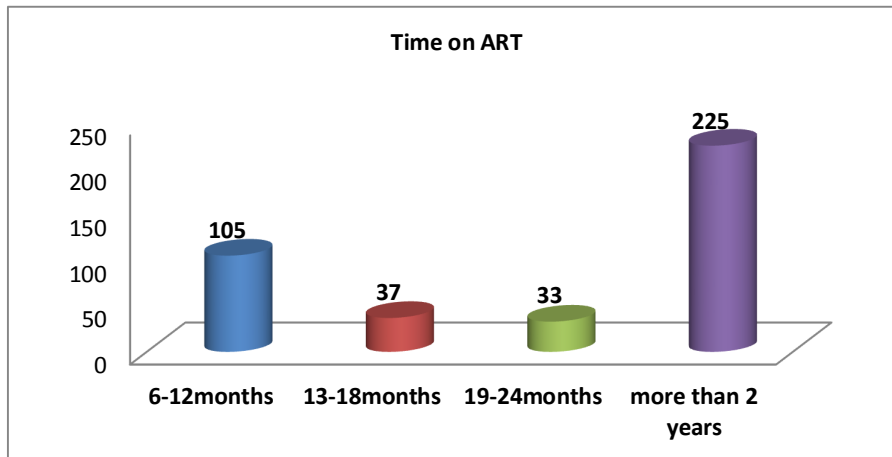


Figure 13 shows the length of time participants had been receiving ART. The majority 225 (56.3%) were on ART for more than 2 years, 105 (26.3%) for 6-12months, 37 (9.3%) for 13-18 months, 33 (8.3%) for 19-24months.

4.4. Sexual relations and behaviour

4.4.1 Participants were asked to give information regarding their sexual activities in the last 3 months; the results are presented in figure 14 below.

Figure 14: Number of participants who were sexual active

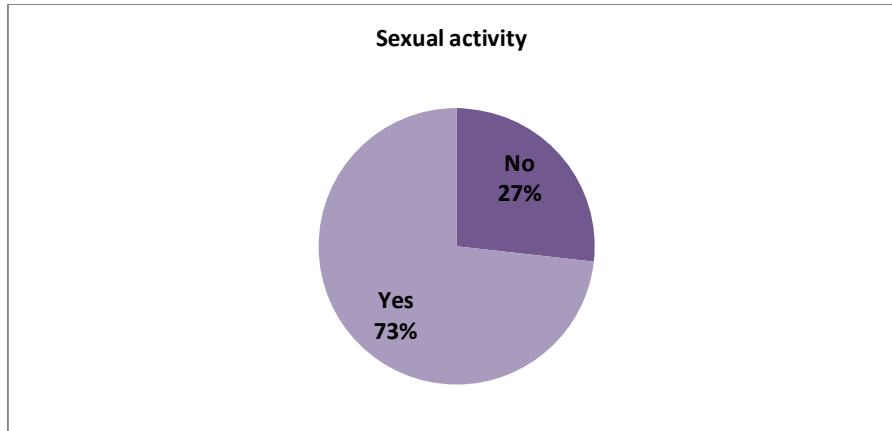


Figure 14 present the sexual activities of the participants, 293 (73.3%) were in sexual relationships while 107 (26.8%) had no sexual partners.

4.4.2 Participants were asked to give information whether are they living with their sexual partners, the results are presented in figure 15 below.

Figure 15: Number of participants who lived with partners

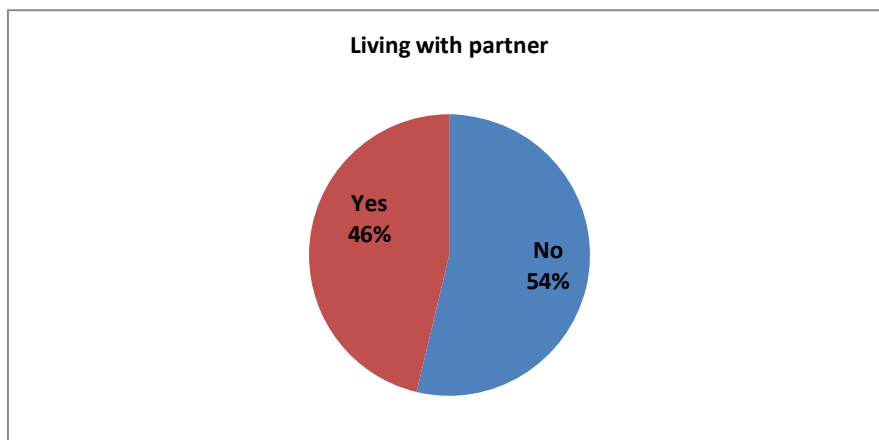


Figure 15 shows that the majority 215 (53.8%) of participants were living with their partners while 185 (46.3%) were living alone.

4.4.3 Participants were asked to give information regarding the nature of relationship they had with their partners; the results are presented in figure 16 below

Figure 16: Nature of relationship of the study participants had with partners

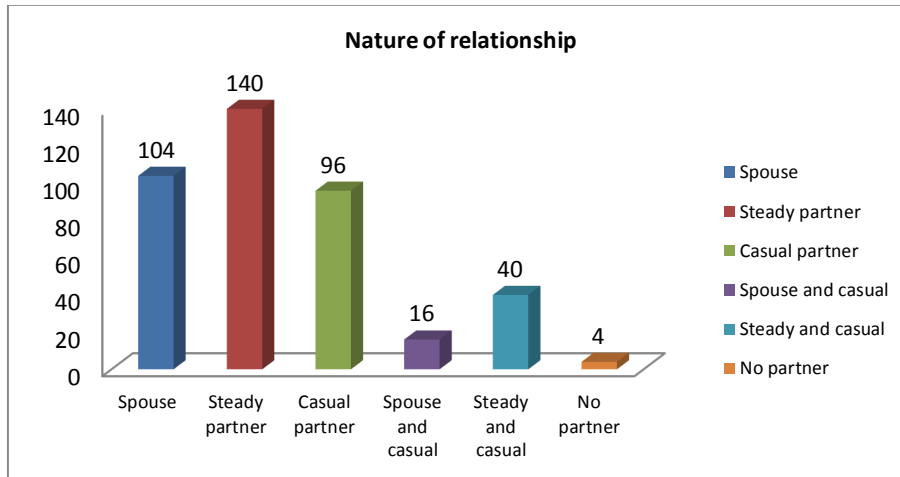


Figure 16 shows the nature of relationship of study participants. The majority 140 (35 %) were in steady relationships, 104 (26%) were married, 96 (24 %) were in casual relationships. The results also show that 40 (10 %) of the participants in steady relationships had a casual sexual partner, while 16 (4%) of the married participants had a casual sexual partner, only 4 (1%) participants had no sexual partner.

4.4.4 Participants were asked to give information regarding the number of sexual partners they had in the last 12 months. The results are shown in figure 17.

Figure 17: Number of Sexual partners' of study participants

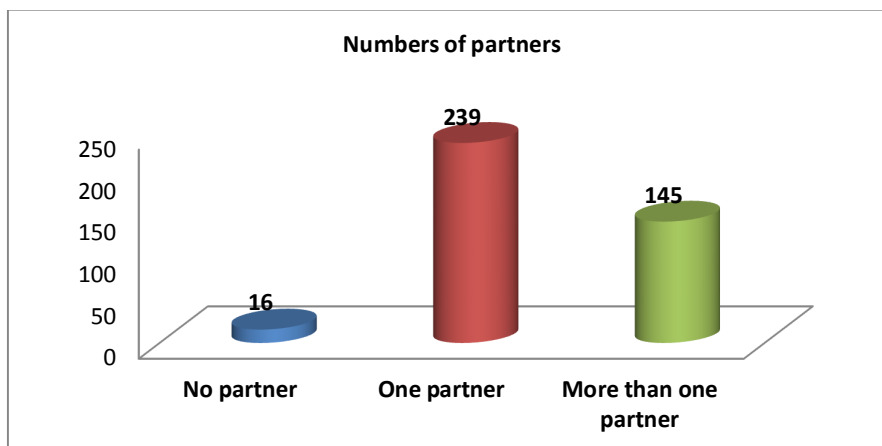


Figure 17 shows the number of partners participants reported to have had in the past 12 months. Majority 239 (59.75 %) of the participants had one sexual partner, while 145 (36.25 %) had more than one sexual partners, and only 16 (4 %) participants had no partner.

Table 1: Number of sexual partners by gender

Tabulate gender by number of partners, chi2				
Number of partners				
Gender	0	1	2	Total
Female	12	164	53	229
Male	4	75	92	171
Total	16	239	145	400
Pearson	chi2(2) = 40.0643		Pr = 0.000	

Table one presents STATA output on gender and number of sexual partner. Gender was statistically significantly associated with having more than one sexual partner.

4.4.5 Participants were asked to provide information regarding the use of condoms with their sexual partners. The results are presented in figure 18 below.

Figure 18: Condom use with sexual partner

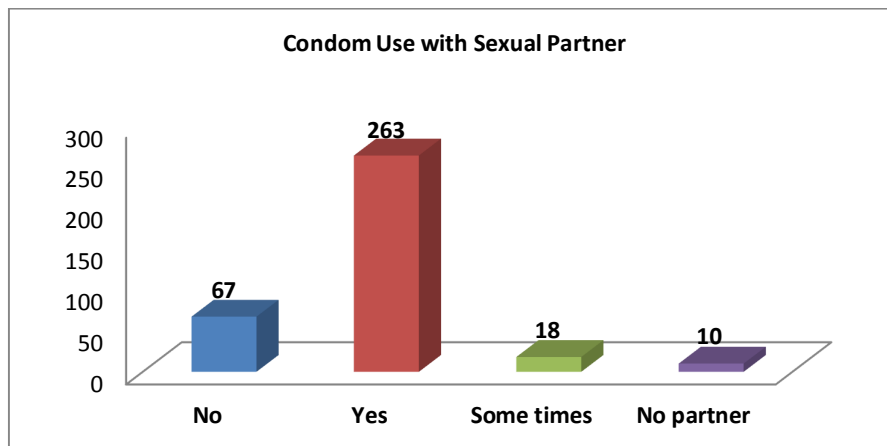


Figure 18 shows condom use with sexual partner among study participants. The majority 263 (73.5%) reported that they used condoms with their sexual partners, while 67 (18.7%) were not using condom, 18 (5.0%) were not using condoms consistently, and 10 (2.8%) had no sexual partner.

4.4.6 Participants who reported that they had more than one sexual partner were asked to provide information regarding condom use.

Figure 19: Condom use with casual partner

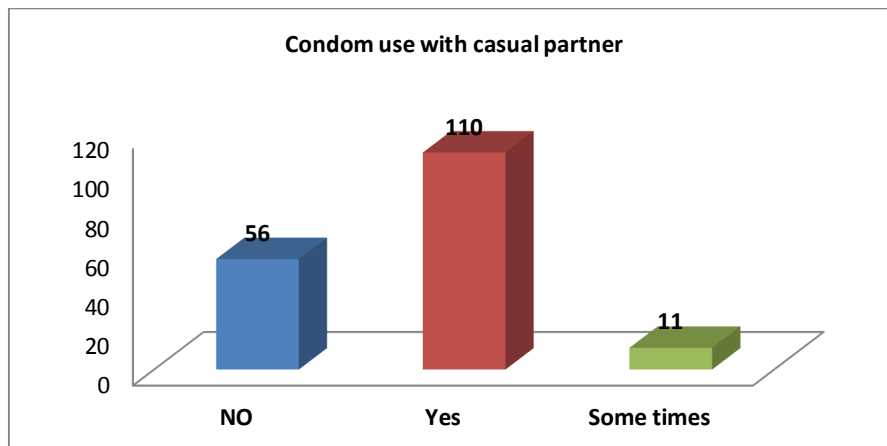


Figure 19 shows condom use with casual partner among participants with more than one sexual partner. The majority 110 (62.2%) reported that they used condoms with their casual partners, 56 (31.6%) reported not using condoms with casual partner, while 11 (6.2%) reported inconsistent use of condoms with casual partners.

Table 2: Condom use with casual partner by gender

Tabulate gender condomuse1, chi2			
Condom use			
Gender	0	1	2
Female	14	54	3
Male	42	56	8
Total	56	110	11
Pearson	chi2(3) = 4.5770		Pr =0.008

Table two presents STATA output on gender and condom use with casual sexual partner. Gender was statistically significantly associated with condom use with casual sexual partners.

4.5 Disclosure of HIV status to sexual partners

4.5.1 Participants were asked if they disclosed their HIV status to sexual partners. The results are presented in figure 20 below.

Figure 20: Number of participants who disclosed to sexual partners

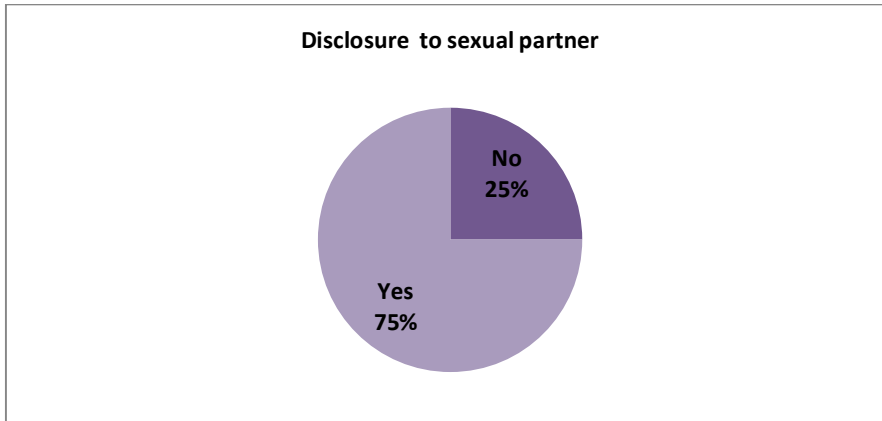


Figure 20 shows participants' responses on disclosure of HIV status to sexual partner. The majority 261 (75 %) had disclosed their HIV status to sexual partners while 87 (25 %) reported that they had not disclosed their status to sexual partners.

4.5.3 The participants who disclosed to sexual partner (n=261) were asked to provide information on when they disclosed their HIV status to their sexual partners. The results are presented in figure 21 below.

Figure 21: Length of time it took to disclose to sexual partner

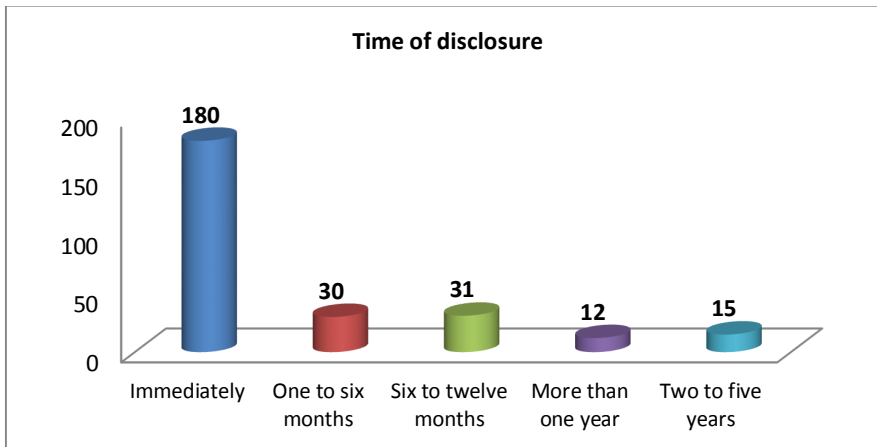


Figure 21 shows the time it took for participants to disclose their HIV status to sexual partners (n=261). The majority 180 (67, 2%) disclosed immediately following their positive HIV test, 31 (11, 6%) disclosed after six to twelve months, 30 (11, 2%) disclosed after one to

six month, 15 (5, 6%) disclosed after two to five years, and 12 (4, 5%) disclosed after one year.

4.5.4 Factors associated with disclosure to partner

Pearson X^2 analyses was conducted to determine factors associated with HIV status disclosure to sexual partners. Variables that were statistically significantly associated with disclosure are presented in the tables below.

Table 3: Disclosure by age category

Tabulate age category disclosure sexual partner chi2			
Disclosure to sexual partner			
Age category	0	1	Total
18-30	22	43	65
31-40	46	103	149
41-50	14	61	75
51-60	5	36	41
61-70	0	15	15
71-80	0	2	2
Total	87	260	347
Pearson	chi2(5)=16.2776	Pr=0.006	

Table three presents STATA output on disclosure to sexual partners by age category. Age was significantly associated with disclosure to sexual partners ($p=0.006$).

Table 4: Tabulation of disclosure by marital status

Tabulate marital status and disclosure to sexual partner, chi2			
Disclosure to sexual partners			
Marital status	0	1	Total
Single	61	109	170
Married	8	97	105
Cohabiting	11	24	35
Widowed	4	20	24
Divorced	3	10	13
Total	87	260	347
Pearson	chi2(4) = 29.2835	Pr = 0.000	

Table four presents STATA output on disclosure to sexual partners by marital status. Marital status was significantly associated with disclosure to sexual partners ($p<0.000$).

Table 5: Tabulation of disclosure and discussion HIV test with partner

Tabulate discussing HIV test and disclosure to sexual partner, chi2			
Disclosure to sexual partners			
Discussing HIV test	0	1	Total
No	67	88	155
Yes	20	172	192
Total	87	260	347
Pearson	chi2(1) = 49.1428	Pr = 0.000	

Table five shows that discussing HIV testing with partners was significantly associated with disclosure to sexual partners ($p < 0.000$).

Table 6: Tabulation of knowing partner's HIV status and disclosure

Tabulate knowing partner's status and disclosure to sexual partner, chi2			
Disclosure to sexual partners			
Know partner status	0	1	Total
No	75	46	121
Yes	12	214	226
Total	87	260	347
Pearson	chi2(1) = 134.7393	Pr = 0.000	

Table six presents STATA output and shows that knowing partner's HIV status was significantly associated with disclosure to sexual partners ($p < 0.000$).

Table 7: Tabulation of time on ART and disclosure

Tabulate time on ART and disclosure to sexual partner, chi2			
Disclosure to sexual partner			
Time on ART	0	1	Total
6-12 months	29	65	94
13-18 months	12	20	32
19-24 months	12	19	31
< 2 years	34	156	190
Total	87	260	347
Pearson	chi2(3) = 12.5812	Pr = 0.006	

Table seven presents STATA output, time on ART was significantly associated with disclosure to sexual partners ($p = 0.006$).

Table 8: Tabulation of disclosure to sexual partners by living with partner

Tabulate living with partner and disclosure to sexual partner, chi2			
Disclosure to sexual partner			
Living with part partner	0	1	Total
No	65	98	163
Yes	22	158	180
Total	87	256	343
Pearson	chi2(1) = 34.5577	Pr = 0.000	

Table eight presents STATA tabulation, living with a partner was significantly associated with disclosure to sexual partners ($p < 0.000$).

Table 9: Tabulate disclosure to sexual partners by nature of relationship

Tabulate nature of relationship and disclosure to sexual partner, chi2			
Disclosure to sexual partner			
Nature relationship	0	1	Total
Spouse	8	91	99
Steady partner	40	90	130
Casual partner	29	32	61
Spouse and casual	0	16	16
Steady and casual	9	30	39
No partner	1	1	2
Total	87	260	347
Pearson	chi2(5) = 39.9515	Pr = 0.000	

Table nine presents STATA tabulation, the nature of the relationship was significantly associated with disclosure to sexual partners ($p < 0.000$).

Table 10: Tabulate disclosure by number of sexual partners

Tabulate number of partners and disclosure to sexual partners, chi2			
Disclosure to sexual partner			
Number of partner	0	1	Total
One partner	45	94	139
> than one partner	37	163	200
Total	82	257	339
Pearson	chi2(1) = 8.6081	Pr = 0.003	

Table 10 presents STATA tabulation, number of sexual partners was significantly associated with disclosure to sexual partners ($p = 0.003$).

4.6 Disclosure to casual partner

4.6.1 Participants with more than one sexual partner (n=145) were asked if they had disclosed their HIV status to casual partners. The results are shown in figure 20 below.

Figure 22: Number of participants who disclosed to casual partners

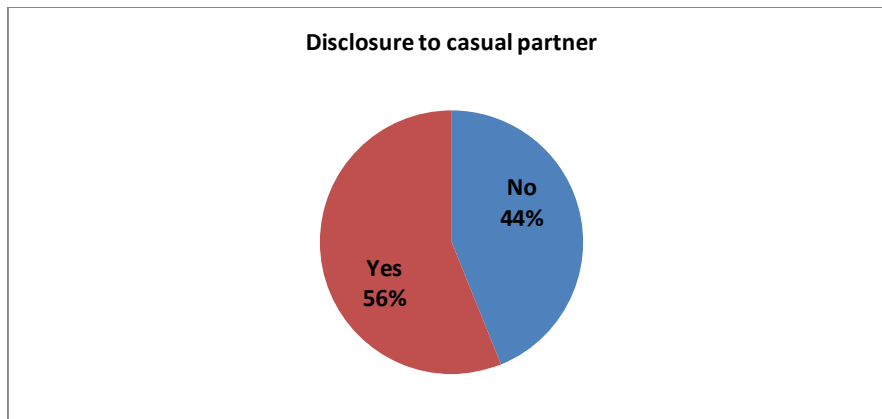


Figure 22 shows the participants responses to disclosure to casual partners. Of the (n=145) participants who had more than one sexual partner, the majority 96 (56%) reported disclosing their HIV status to their casual partner, while 75 (44%) had not disclose their HIV status to casual partner

4.6.2 The participants who disclosed to casual partners (n=145), were asked to provide information on when they disclosed their HIV status to their casual partners. The results are presented in figure 22 below.

Figure 23: Length of time it took to disclose to casual partners

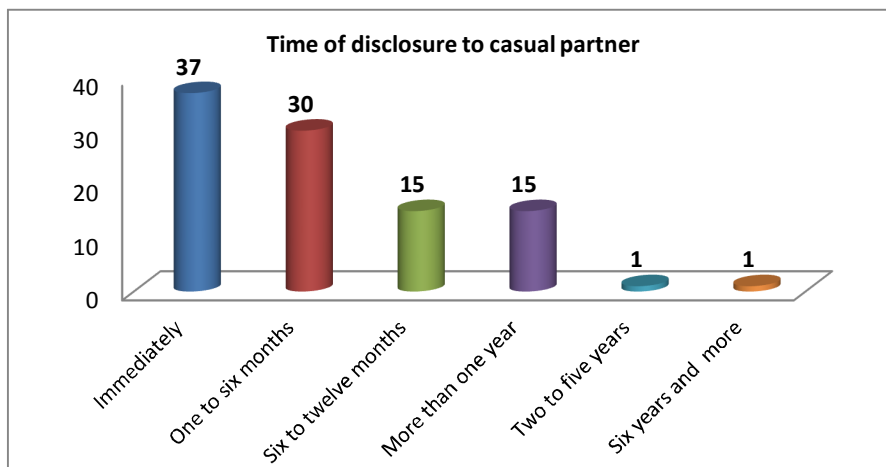


Figure 23 shows the time it took for participants to disclose their HIV status to sexual partners (n=145). The majority 37 (38.5%) disclosed immediately following their positive HIV test, 30 (31.3%) disclosed after one to six month, 15 (15.6%) disclosed after six to twelve months, and 15 (15.6%) disclosed after one year.

4.6.3 Factors associated with disclosure to casual partners

Pearson χ^2 analyses were conducted to determine factors associated with HIV status disclosure to casual sexual partners. Variables statistically significantly associated with disclosure are presented in the tables below.

Table 11: Tabulation of disclosure and gender of casual partner

Tabulate gender disclosure to casual partner, chi2			
Disclosure to casual partner			
Gender	0	1	Total
Female	16	51	67
Male	59	45	104
Total	75	96	171
Pearson	chi2(2) 19.3407		Pr = 0.000

Table 11 presents STATA output on disclosure to sexual partners by gender. Gender was significantly associated with disclosure to casual sexual partners ($p < 0.000$).

Table 12: Tabulation of disclosure and discussion HIV test with partner

Tabulate discussing HIV test and disclosure to casual partner, chi2			
Disclosure to casual partner			
Discuss HIV test	0	1	Total
No	51	39	90
Yes	24	57	82
Total	75	96	172
Pearson	chi2(2) 13.7527		Pr = 0.001

Table 12 shows that discussing HIV testing with partners was significantly associated with disclosure to sexual partners ($p = 0.001$).

Table 13: Tabulation of knowing partner's HIV status and disclosure

Tabulate knowing partner status and disclosure to casual partner, chi2			
Disclosure to casual partner			
Know partner status	0	1	Total
No	48	30	78
Yes	27	66	93
Total	75	96	171
Pearson	chi2(2) 19.0565	Pr = 0.000	

Table 13 presents STATA output and shows that knowing partner's HIV status was significantly associated with disclosure to casual sexual partners ($p < 0.000$).

Table 14: Tabulation of nature of relationship and disclosure

Tabulate nature of relation and disclosure to casual partner, chi2			
Disclosure to casual partner			
Nature of relationship	0	1	Total
Spouse	6	6	12
Steady partner	18	14	32
Casual partner	32	41	73
Spouse and casual	3	13	16
Steady and casual	15	22	37
No partner	1	0	1
Total	75	96	171
Pearson	chi2(10) = 92.6199	Pr = 0.000	

Table 14 presents STATA tabulation, nature of relationship was significantly associated with disclosure to casual sexual partners ($p < 0.000$).

4.7. Disclosure to other people

4.7.1 All participants were asked to indicate if they disclosed their HIV status to other people besides their sexual partners. The results are presented in figure 24 below.

Figure 24: Categories of people participants disclosed their HIV status to

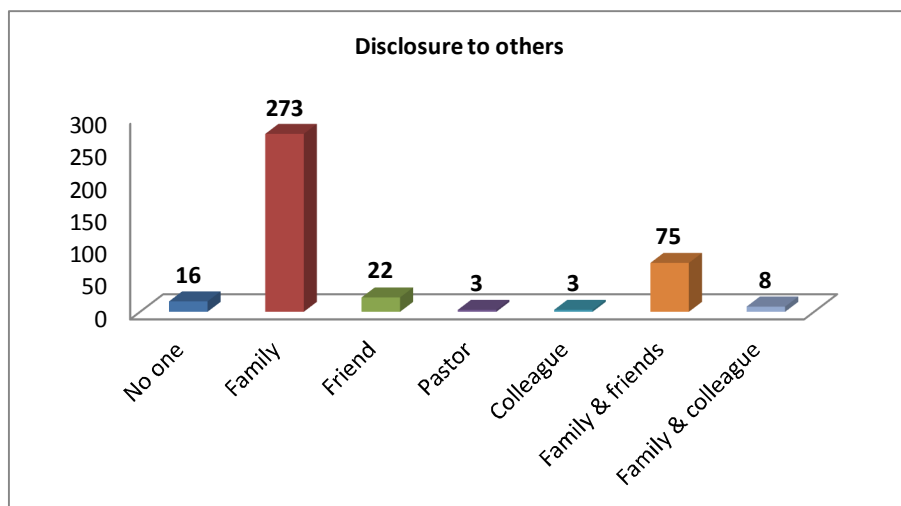


Figure 24 shows the categories of people participants disclosed to. The majority 273 (68.3%) disclosed to their families (parents, siblings, and children), 74 (18.5%) disclosed to family and friends, 22 (5.5%) disclosed to friends, and 16 (4%) did not disclose at all.

4.8 Reasons for disclosure of HIV status

Participants who reported that they had disclosed to their sexual partners provided information on their reasons for disclosing. Most responses were associated with multiple reasons for the decision to disclose.

Table 15: Reason for disclosing HIV status to sexual partners (n=261)

Reasons for disclosing HIV status to partners	Frequency
I want to protect my partner from being infected with HIV	197
I need spiritual support from my partner	195
I need emotional support from my partner	193
I tell my partner every thing	183
I need financial support from my partner	132
My partner was with me when I tested	65
We both tested on same day	59

*Participants gave multiple responses therefore; the responses do not add up to 261.

Table 15 presents the reasons for disclosure to sexual partners. The majority of participants disclosed to protect their partners from HIV infection, because they needed spiritual and emotional support from partners, while a high proportion disclosed because they tell their partners everything. A small proportion of the partners were with their partners when they tested while others tested on the same day with their partners.

4.9 Partners' reaction to disclosure

Participants were asked to describe their partners' reaction following disclosure. Similar to reasons for disclosure, participants were given multiple options to choose from. Their responses are presented in table 17.

Table 16: Partners' reaction to HIV disclosure

Partners' reaction to disclosure	Frequency
My partner became supportive	207
My partner was shocked	120
My partner denied the test results	72
My partner was neutral	69
My partner blamed me for the infection	65
My partner ended the relationship	36
My partner became violent towards me	30
My partner was angry	28
My partner divorced me	23

Table 16 presents reported partners' reactions to HIV status disclosure. The majority of participants reported that their partners became supportive. A high proportion reported that their partners reacted with shock from the disclosure, while a small proportion reported that their partners denied the HIV test results, some never showed any reaction, while a few partners blamed the participants for the HIV infection.

4.10 Reasons for not disclosing HIV status

Participants who reported that they had not disclosed their HIV status to sexual partners provided information on their reasons for not disclosing. Participants had various options to choose from, responses are presented in table 18.

Table 17: Reasons for not disclosing HIV status to sexual partner (n= 87)

Reasons for not disclosing to partners	
My partner might leave me.	73
My partner might be afraid of catching HIV from me.	72
My partner might think I am unfaithful.	72
My partner might get angry with me.	65
My partner might hurt me physically.	18
My partner might stop supporting me financially.	14

*Participants gave multiple responses therefore, the responses do not add up to 87.

Table 17 presents the reasons for not disclosing the HIV status to sexual partners. The majority of participants did not disclose because; they thought that the partner might leave them, the partner might be afraid of catching HIV from them, the partner might think they were unfaithful, while others thought that their partner might get angry with them. A small proportion of the participants did not disclose because they thought that their partners might hurt them physically, while others thought that their partners might stop supporting them financially.

Chapter 5: Discussion, Conclusion and Recommendations

5.1 Introduction

The purpose of the study was to determine the prevalence and reasons for disclosure of HIV status to sexual partners, and the reactions of partners to disclosure among clients on antiretroviral treatment at the Charlotte Maxeke Johannesburg Academic Hospital. This chapter present the main findings of the study, first the demographic profile of the participants is presented, followed by a discussion of the main results; lastly the study conclusion, recommendations and study limitation is presented.

5.2 Socio-Demographics

The study recruited a total sample of 400 participants, and the sample included both males and females who had an equal opportunity to participate in the study. The results show that there were more female 229 (57%) than male 171 (43%) participants in this study. Besides bearing the burden of caring for HIV infected persons, women are also disproportionately infected when compared to men (Wong et al. 2009). The gender distribution of participants in a study conducted in Ethiopia also found that there were more females than males. The authors attributed the gender distribution to the higher number of females who were accessing services from the health centre where the study was conducted (Seid et al. 2012).

The mean age of the participants was 39.9 years, with standard deviation (SD=10.8 years), and most 42% participants were in the age group 31-40 years, while almost a quarter (22%) were in the 41-50 years age group. The high proportion of participants in the 40 years and above age group is in line with the time since the roll out of ART in the country. In contrast, a study conducted by Seid et al. (2012) in Ethiopia on disclosure of HIV positive results to sexual partners among adults showed a mean age of the 33.4 years, and the majority of participants were between 15-34 years. The difference in the mean age of participants might be attributed to the fact that almost half (44.5%) of the participants in the current study had known their HIV diagnosis for more than five years, whereas the participants from the study in Ethiopia had known their HIV diagnosis for less than two years (Seid et al. 2012).

Slightly more than half (52.8%) of the participants were single, about a quarter (26.5%) were married, while less than a tenth (8.8%) were cohabiting. The rest of participants were either widowed or and divorced. King et al. (2008) reported that more than half (55%) of participants in their Ugandan study were widowed, separated or divorce which differs with our findings where only 12.1% of the participants were widowed and divorced.

With regards to the educational attainment of the participants, the majority (59.3%) had secondary education, about a quarter (23.8%) had tertiary education, (13.8%) had primary education, while 15 (3.8%) had never been to school. The high proportion of participants with secondary education is in line with previous reports in South Africa (Mlambo and Peltzer 2011). Similarly, findings from Ethiopia show that more that (56.2%) of the participantø had secondary education (Deribe et al. 2008).

More than a third (35.3%) of the participants were unemployed, less than half (44.4%) were fully employed, 7.0% were self-employed, and 11.3% were on part-time employment, and only (2.0%) were still schooling. Mlambo and Peltzer (2011) also found high unemployment rate among participants in their study; they reported that only a few women were employed whereas all the men were unemployed at the time of the data collection.

The majority (89.8%) of the participants were Blacks, (6.8%) were Coloured and White respectively and less than (1.3 %) were Asians. In a similar South Africa study on disclosure to sexual partners, Blacks were in the majority when compared to Whites, Coloureds and Indians (Simbayi et al. 2007). The study findings are in line with the HIV prevalence in South Africa, where high rate of HIV infection is among Blacks (Shisana et al. 2009).

5.3 HIV related information

Slightly more than half (52.3 %) of the participants had discussed HIV testing with their partners compared to (47.8%) who had not discussed HIV testing with partners. The results are higher than those reported among HIV-positive pregnant women in a South African study, where only a third (31%) of the women discussed HIV testing with their partner prior to being tested (Makin et al. 2008). Similarly, results from a study conducted in Uganda also found that only a third (31.7 %) of participants had prior discussion about HIV and testing with their partners (Seid et al. 2012).

With regards to the reasons for testing, the majority (61.2%) of the participants reported that sickness was their reason for HIV testing, (17.8%) tested for HIV during pregnancy, (16.5%) reported that HIV testing was voluntary, the rest tested because they needed to get married, their partners were pregnant, their babies were sick, and their partner died or was sick.

Mlambo and Peltzer (2011) reported similar reasons for HIV testing, participant in their study reported that they tested because of a child's death, during pregnancy, and through sickness. While knowing someone who has died of AIDS and seeing someone getting ART were the reasons for HIV testing among participants in Mozambique (Agha 2012). Findings from a study conducted in India also show that participant tested because of HIV-related symptoms (Sivaram et al. 2008).

More than half (56 %) of participants indicated that they had known about their HIV diagnosis for 1-5 years, a third (29.25%) had known for 6-10 years, while slightly more than a tenth (11.75%) had known for 11-15 years, and only 12 (3.0%) had known about their HIV diagnosis for 16-25 years. A study conducted by Illa et al. (2008) in the USA reported a mean time of 11 years since diagnosis. According to Sullivan et al. (2010) with the advent of ART, PLWH are living longer with less overt disease manifestations than previously observed.

With regards to time on ART, more than half (56.3%) of the participants reported that they had been on ART for more than 2 years, while (43.7%) had been on ART for less than 2 years. Seid et al. (2012) reported that (46.1%) of participants had tested within one year of the data collection while (53.95%) tested before one a year of study. The difference with the current study is that participants had known about their HIV status for more than one year and above.

More than two thirds (63%) of the participants reported knowing their partner's HIV status, A high proportion (78 %) of the participants who knew their partners status reported that their partners were HIV positive, while (22 %) reported that their partners were HIV negative. In a study conducted by Mlambo and Peltzer (2011), about a quarter (21%) of the participants reported that their partners were HIV positive while (13%) reported that their partners were HIV negative. A study conducted in Nigeria reported slightly higher percentages, about (44.6%) of the participants did not know their partner's HIV status, (25.1%) had HIV-positive partners while (30.3%) had a negative partner (Amoran 2012). A study conducted by Seid et al. (2012) reported higher knowledge of partner status in Uganda, where (77.8%) of

the participants knew their partner's HIV status. The majority (84.6) reported that their partners were HIV positive and (15.4%) reported that their partners were HIV negative. With regards to participants who reported not knowing their partners HIV status, the results show that 37% of the participants did not know their partner's HIV status. Similar findings on the lack of knowledge of partner's HIV testing status has been well documented in other studies (Amoran 2012; Deribe et al. 2008; Seid et al. 2012). The current study found that age was significantly associated with knowing partner's HIV status, participants older than 40 years were more likely to know their partner's HIV status than participants younger than 40 years, OR=1.61, CI: 1.30-1.99, $p<0.000$. Marital status was also significantly associated with knowing partner's HIV status, married participants were more likely to know their partner's HIV status than single, cohabiting, divorced and widowed participants, OR=1.41, CI: 1.15-1.73, $p=0.001$. Time on ART was significantly associated with knowing partner's HIV status. Participants who were on ART for more than two years were more likely to know their partner's HIV status than partners who were on ART for less than 2 years, OR=1.30, CI: 1.11-1.52, $p=0.001$. Conserve et al. (2012) also reported that marital status was significantly associated with knowing partner's HIV status. Married participants were more likely to know their partner's HIV status than single/never married and unmarried participants.

5.4 Sexual practice

The study found that a high proportion (62.2%) of the participants had single sexual partner, while (37.8 %) had more than one sexual partner. The finding on multiple sexual partners is slightly lower than previously reported finding in a similar study conducted in South Africa by Simbayi et al. (2007) where (40%) of the participants had more than one sexual partner. A study conducted by Dessie et al. (2011) among ART attendants in Ethiopia, reported lower percentage (10%) of participants who had more than one sexual partner as compared to our study findings of (37.7%). In a study conducted in Botswana, similar findings of lower percentages (20%) of participants with more than one sexual partner were also reported (Kalichman et al. 2007). The current study findings show that gender was significantly associated with having multiple sexual partners. Men were more likely to have multiple sexual partners than women ($p<0.000$). Ragnarsson et al. (2011) also found a significant association between male gender and the tendency to engage in multiple partnerships.

The majority (73, 5%) of participants who were sexually active reported that they used condoms consistently, (18, 7%) never used a condom, while 18 (5, 0%) used condoms inconsistently. The findings are in line with studies conducted in Ethiopia among HIV positive individuals receiving ART. The results show that (63.1%) of participants had used condoms consistently, while (15.1%) had used them inconsistently, and (21.8%) had never used a condom (Dessie et al. 2011).

The study further found that discussing HIV testing with partner, time on art, and knowing the partner's HIV status were significantly associated with condom use with sexual partner. Participants who discussed HIV testing with the partner were more likely to use condoms than those who did not discuss their HIV testing ($p=0.004$). Knowledge of partner's HIV status was significantly associated with condom use. Participants who knew the partner's HIV status were more likely to disclose than those who did not know the partner's HIV status ($p<0.000$). Time on ART was also significantly associated with condom use; participants who were on ART for more than two years were more likely to use condoms than those who were on ART for less than two years. Ragnarsson et al. (2011) found that participants who had been on ART for more than 19 months were less likely to use condoms inconsistently compared with those who had been on treatment for less than six months. Findings from a recent study conducted in Tanzania, show that participants who were aware of their partner's HIV status were more likely to use condoms than those unaware of their partner's HIV status (Conserve et al. 2012).

Of the participants who had more than one sexual partner ($n=145$), two thirds (62. 2%) reported using condoms with casual partners as compared to (37.8%) who reported not using condoms with casual partner. The results in this study show that more men (75%) reported not using condoms with casual partners than women (25%). The gender difference is significantly associated with not using condoms with casual sexual partner ($p=0.008$). Similar findings on condom use and multiple sexual partners were reported by Dessie et al. (2011) in Ethiopia. A high proportion (81.1%) of participants in a study conducted in Nigeria, reported using condoms consistently, while (18.9%) never use a condom or any form of protection. Participants who had multiple sexual partners were significantly associated with not using condom (Titilope et al. 2011).

Although the current study did not collect data on the reasons for not using condoms, in a study conducted in India, Chakrapani et al. (2010) report that some participants did not use condoms consistently with their casual partners believing that they probably contracted HIV from casual partners. Other participants gave a variety of reasons for engaging in unprotected sex, for example, participants felt that because they were both HIV positive, there was no need for using condoms since they could not infect each other. This finding has implications for HIV prevention and intervention programs for HIV positive people. There is a need to strengthen counselling on safe sex and condom use.

5.5 Disclosure to partner

High proportion of participants (75 %) had disclosed their HIV status to sexual partner and a quarter (25 %) had not disclosed their status to sexual partners. The prevalence is higher than previous findings Nigeria (50.9%), Uganda (69%), and Nigeria (61.6%) on disclosure to sexual partner (Amaran 2012; King et al. 2008; Titilope et al. 2011). Of the (n=145) participants who disclosed to sexual partners, (66%) disclosed to casual partners as compared to (34%) who did not disclose to casual partners.

With regards to the time it took to disclose the HIV status to partners, more than a third (67.2%) disclosed immediately after the diagnosis, slightly less than a quarter (23.4%) disclosed after six months but less than one year, about a tenth (10.1%) disclosed after one year and above. A similar pattern was observed with disclosure to casual partners, the majority (38.5%) disclosed immediately after the diagnosis, a third (31.3%) disclosed after six months but less than one year, and (15.6%) disclosed after one year and above. Early disclosure to sexual partners was also reported by other studies. In an Ethiopian study, (80%) of the participants disclosed their HIV positive status between 1-6 months (Gari et al. 2010).

The study found that disclosure to sexual partners was significantly associated with gender, discussing HIV testing with sexual partner, knowing partner's HIV status, and living with partner. Male participants were less likely to disclose their HIV status to sexual partners as compared to female participants ($p=0.012$). Participants who discussed HIV testing with partners prior to the HIV test were more likely to disclosure than those who did not discuss HIV testing with partners ($p>0.000$). Participants who reported living with partners were more likely to disclose than participants who live alone ($p=0.049$), while participants who knew their partner's HIV status were also more likely to disclose than those who did not

know their partners status. Discussing HIV test with another person was significantly associated with disclosure to sexual partners in other studies (Deribe et al. 2008; Kadowa and Nuwaha 2009). Gari et al. (2010) found that being on ART for more than one year and knowing the HIV status of the partner were significantly associated with HIV status disclosure. The authors argue that as patients stay longer duration in HIV care services; they obtain information about HIV including the benefits and way of disclosure. Deribe et al. (2008) also reported that participants who know the partners HIV status were more likely to disclose to their partners.

With regards to disclosure to casual partners, the study found that gender, discussing HIV testing with sexual partner, and knowing partner's HIV status were significantly associated with disclosure.

5.6 Disclosure to others

Participants also disclosed their HIV status to persons other than their partners, and the results show that the majority (68.3%) disclosed to family members, (18.5%) disclosed to family members and friends, only a few (5.5%) disclosed to friends. Family in this study comprised of parents, siblings and children. Participants in a Ugandan study also disclosed to multiple people, a third (30%) disclosed to their parents, (34%) to siblings, (20%) to children (34%) to other close relatives, and (50%) to close friends (Kadowa and Nuwaha 2009).

Literature shows that often HIV positive people disclose to family to receive support with treatment adherence. Kadowa and Nuwaha (2009) reported that one of the reasons for disclosure to other people was the need to get treatment. Similar reasons were reported by Ssali et al. (2010), participants in their study disclosed to family members for the purpose of receiving support.

5.7 Reasons for disclosure

Participants gave multiple responses on the reasons for disclosing HIV to their sexual partner. The most common responses were; they needed to protect their partner from being infected with HIV, they needed spiritual support, they needed emotional support, and they need for financial support. To receive support accounted for most reasons for disclosure among respondents in a study conducted in Uganda (Ssali et al. 2010).

High proportion of participants reported that they tell their partners everything, and that their partners were with them when they took the HIV test, and some tested on the same day with their partner. Participants in another South African study disclosed to receive material and emotional support from their partners (Norman et al.2007). Similar findings were documented in studies conducted elsewhere, the reasons cited for disclosure were to get financial and social support from their partners, need to get treatment, while others disclosed because they wanted their partners to undertake HIV test (Deribe et al. 2008; Kadowa and Nuwaha 2009).

5.8 Partner reaction to disclosure

With regards to partner reaction to disclosure, the participants gave multiple responses, and the most common reactions from the partners were support, shock, denial of the test results, neutral reaction, blaming participant for the infection, ending the relationships, violence, anger, and divorce. Results from previous studies conducted in South Africa reported that the most cited partner's reaction to HIV disclosure was denial, shock, anger, blaming partners for the infection, and violence (Visser et al. 2008). Denial of HIV positive results by the sexual partner was also reported in a Ugandan study, participants insisted that they both did not have HIV (Rujumba et al. 2012). Findings from a study conducted in Nigeria show similar findings to our study, the majority (86.9%) of participants reported that their sexual partners became supportive after disclosure.

5.9 Reasons for non-disclosure

The most cited reasons for not disclosing the HIV status to sexual partners were concerns that their partner might leave them, that their partners might be afraid of catching HIV from them, that the partners might think that they were unfaithful, that their partners might get angry with them, that their partners might hurt them physically and that their partners might stop supporting them financially. Mlambo and Peltzer (2011) reported that participants in their study were concerned that their partners might end the relationship. Our findings are similar to other studies, Deribe et al. (2008) reported that participants feared that their partners might get angry, were fearful of separation or divorce, that the partner might be afraid of catching HIV from them, fear of accusation of infidelity, and fear of physical abuse (Deribe et al. 2008). While participants in another Nigerian study reported fear of loss of financial support,

fear of rejection, fear of stigmatization, and loss of intimacy as reasons for nondisclosure to sexual partners (Titilope et al. 2011). Participants in a study conducted in Uganda also mentioned fear of discrimination and stigma, fear of rumour, and mongering as reasons for not disclosing to sexual partners (Kadowa and Nuwaha 2009).

5.10 Conclusion

The prevalence of disclosure was 75% and was comparable to other studies. Sixty percent of the sample comprised of participants older than 30 years with a mean age of 39.9 years. Almost half of the participants had known about their HIV diagnosis for more than 5 years (range 6-25 years). The increased access of ART to adults and children in the country has resulted in HIV positive people living healthier and longer life. However, the results show that people still wait long before seeking HCT; the majority of participants (61%) sought HIV testing because of illness, only 16.5% of the participants tested voluntarily.

High proportion (73%) of the participants was sexually active three months prior to the survey. Of the sexually active participants more than two thirds (63%) reported knowing their partner's HIV status, and 78% reported that their partners were HIV positive while 22% had HIV negative partners. Age, marital status, and time on ART were significantly associated with knowing partners HIV status. More than a third (37.8%) of the sexually active participants had more than one sexual partner, and men were more likely to have multiple sexual partners than women.

The study found a high prevalence (73.5%) of condom use among the sexually active participants; however a quarter (25.5%) reported that they never used a condom. Condom use with steady partners was significantly associated with discussing HIV testing with partner, time on art, and knowing partner's HIV status. On the other hand, the study found low prevalence of condom use with casual sexual partners, (37.8%) participants never used condoms with casual partners. While the study showed that men are more likely to have multiple sexual partners, they were also more likely not to use condoms with their casual sexual partners.

High proportion of participants (75 %) had disclosed their HIV status to sexual partners while a quarter (25 %) had not disclosed. The study found that slightly more than a third (33.5%) of

the participants delayed disclosure to sexual partners, only (67.3%) disclosed immediately after HIV testing. The study found that disclosure to sexual partners was significantly associated with gender, discussing HIV testing with sexual partner, knowing partner's HIV status, and living with partner. With regards to disclosure to casual partners, the study found that gender, discussing HIV testing with sexual partner, and knowing partner's HIV status were significantly associated with disclosure.

The most common cited reasons for disclosure were the need to protect partner from being infected with HIV, the need for spiritual, emotional, and financial support. Most partners became supportive following disclosure. Partner reaction included shock, denial of the test results, being neutral, blaming partner for the infection, ending the relationships, violence, angry, and divorce.

Participants who did not disclose their HIV to partners were concerned that the partner might leave them, that their partner might be afraid of catching HIV from them, that the partner might think that they were unfaithful, that their partner might get angry with them, that their partner might hurt them physically and that their partners might stop supporting them financially.

5.11 Recommendations

The study recommends a more focused disclosure counselling, taking into considerations the factors associated with non-disclosure. Disclosure interventions could support HIV-positive individuals to identify situations when disclosure will be positive and when disclosure will result in negative reactions from the sexual partner.

Researchers and health care providers need to take cognisance of the risky sexual behaviour and low condom use among HIV positive adults receiving ART, and support individuals to initiate risk-reduction behaviors with partners in a culturally appropriate method. Secondary prevention efforts targeting risky sexual behaviour among HIV-positive persons need to receive greater attention.

Though condoms use among steady partners is high, the study found that more than a quarter of respondents did not use condoms at all while some used condoms inconsistently. These

findings highlight the need for aggressive condom use promotion especially among HIV positive people who have not been the focus of awareness campaigns for condom use. Furthermore, there is a need to increase accessibility of condoms in local areas culturally acceptable to youth and HIV positive and negative adults.

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Appendices

Appendix 1: Questionnaire-English

Demographic questions		
1. Age		
2. Gender	Male	Female
3. Marital status	Single	
	Married	
	Cohabiting	
	Divorced	
	Widow	
4. Level of education	No schooling	
	Primary school	
	Secondary school	
	Tertiary level	
5. Race	Black	
	White	
	Coloured	
	Asian	
6. Employment status	Employed	
	Unemployed	
	Part time employed	
	Self employed	
	Schooling	
7. Religion	Christian	
	Muslim	
	Hindu	
	Judaism	
	Other	
<i>The following questions are about HIV testing</i>		
8. Did you talk about HIV testing with partner before testing?		Yes
		No
9. What were the reasons for HIV testing?		
10. How long have known about your HIV status?		
11. Do you know your partner's HIV status?		Yes

	No
12. If yes what is your partner's HIV status?	Positive
	Negative
13. How long are you on ART	6-12 months
	13-18 months
	19-24 months
	More than 2 years
<i>Sexual activity questions</i>	
14. In the past three months, were you involved in a sexual relationship?	Yes
	No
15. Are you living with your sexual partner?	Yes
	No
16. What is the nature of the relationship?	Spouse
	Steady partner
	Casual partner
17. Number of sexual partners in the last 12 months.	One
	More than one
18. Do you use condoms with your sexual partner?	Yes
	No
19. If you have a casual partner, do you use condoms with him/her?	Yes
	No
<i>Disclosure questions</i>	
20. Did you disclose your HIV status to your sexual partner?	Yes
	No
21. If you have a casual partner, did you disclose your HIV status to him/her?	Yes
	No
22. When did you disclose to your partner?	Immediately after testing
	1-6 months
	6-12 months
	More than 1 year
	2-5 years
	6 years and more
23. If you have a casual partner, when did you disclose to him/her?	Immediately after testing
	1-6 months
	6-12 months

	More than 1 year
24. Besides your sexual partner/s who else did you disclose your HIV status to?	Mother
	Father
	Brother
	Sister
	Friend
	Pastor
	Work colleague
	Other
<i>For the next set of questions you may select more than one option. If you have disclosed to your partner please answer question 25 and 26. If not go to question 27.</i>	
25. What was the reason/s for disclosing to your partner?	
25.1 We both tested on same day	
25.2 My partner was with me when I tested	
25.3 I tell my partner every thing	
25.4 I want to protect my partner from being infected with HIV	
25.5 I need emotional support from my partner	
25.6 I need financial support from my partner	
25.7 I need spiritual support from my partner	
25.8 Other	
26. <i>What was your partner's reaction after disclosure?</i>	
26.1 My partner became supportive	
26.2 My partner was neutral	
26.3 My partner blamed me for the infection	
26.4 My partner divorced me	
26.5 My partner ended the relationship	
26.6 My partner was angry	
26.7 My partner was shocked	
26.8 My partner denied the test results	
26.9 My partner became violent towards me	
27. <i>What are the reasons for not disclosing to your partner?</i>	
27.1 My partner might get angry with me	
27.2 My partner might leave me	
27.3 My partner might be afraid of catching HIV from me.	
27.4 My partner might think I am unfaithful	

27.5 My partner might hurt me physically	
27.6 My partner might stop supporting me financially	
<i>The intension for disclosure</i>	
28. Do you intend disclosing to your partner in future	
29. If yes, when are you planning to disclose	

Appendix 2: Questionnaire-IsiZulu

<i>Demographic questions</i>		
1. Iminyaka Age		
2. Ubulili	Isilisa	Owesifazana
3. Mayelana nomshado	Awshadile	
	Shadile	
	Ukuhlalisana	
	Idivosi	
	Umfelokazi/ Umfelwa	
4. Izinga lokufunda	Awfundile	
	Izinga eliphansi lokufunda	
	Isikolo esikhulu	
	Izinga eliphezulu	
5. Umhlobo	Onsundu	
	Umlungu	
	Ikhaladi	
	Indiya	
6. Ezomsebenzi	Uqashiwe	
	Awsebenzi	
	Ukutohoza	
	Ukuzisebenzela	
	Usafunda	
7. Inkolo	Umkrestu	
	Inkolo yamaSulumani	
	Inkolo yamaNdiya	
	Inkolo yamaJuda	
	Eminye.....	
<i>Imbuzo mayelana nokuhlola i-HIV</i>		
8. Naxoxisana mayelana neHIV phambi kokuhlola?	Yebo	
	Cha	
9. Izizathu zokuhlola i-HIV?		
10. Unesikhathi esingakanani wazi ukuthi unesandulela ngculazi?		
11. Uyasaziyi ini i-status somlingani wakho?	Yebo	
	Cha	

12. Ma- uphendule wathi yebo, sithini i-status sakhe?	Positiv
	Negativ
13. esingakhi uthatha ama-ART?	6-12 Izinyanga
	13-18 Izinyanga
	19-24 Izinyanga
	Idlulile iminyaka ewu-2
<i>Imbuzo mayelana nocansi</i>	
14. Kulezinyanga ezu-3 edlulile uwenzile ucansi?	Yebo
	Cha
15. Uhlala naye lomuntu owenza naye ucansi?	Yebo
	Cha
16. Bunjani ubudlelwano phakathi kwenu nobabili?	Umlingani
	Umuntu wakho
	Umuntu wesikhashana
17. Kulezinyanga ezu-12 edlulile ulale nabantu abangakhi?	Oyedwa
	Dlula koyedwa
18. Niyazivikela yini uma niya ocansini?	Yebo
	Cha
19. Uma unomakwapheni, nyalisebenzisa yini ijazi lakuzivikela?	Yebo
	Cha
<i>Imbuzo yokuvuma</i>	
20. Usuke wamtshe umlingani wakho ngesimo sakho se-HIV	Yebo
	Cha
21. Uma uno makwapheni, wake wamazisa nge simo sakho se-HIV	Yebo
	Cha
22. Wamtshe nini umlingani wakho?	Ngokushesha
	1-6 izinyanga
	6-12 izinyanga
	Unyaka usudlulile
	2-5 iminyaka
	Iminyaka ewu-6 naphezulu
23. Uma unomakwapheni wamazisa nini ngesimo sakho	Ngokushesha
	1-6 izinyanga
	6-12 izinyanga
	Unyaka usudlulile

24. Makukhona owamtshela ubani na?	Umama
	Ubaba
	Umfowethu
	Udadewethu
	Umngani
	Umfundisi
	Egisebenza naye
Abanye	
25. Yini eyakwenza umtshela umlingani wakho	
25.1 Sahlola kanyekanye ngosuku olufanayo	
25.2 Nganginaye uma ngohlola	
25.3 Ngimtshela konke umlingani wami	
25.4 Ngifuna ukuvikela umlingani wami ukuze angatholi igcikwane	
25.5 Ngidinga ukusekwa umlingani wami	
25.6 Ngidinga isizo lwemali kumlingani wami	
25.7 Ngidinga ukusekwa ngokomoya kumlingani wami	
25.8 Okunye	
26. Waphatheka kanjani umlingani wakho uma umtshela	
26.1 Umlingani wami waba nokungeseka	
26.2 Umlingani wami akazanke enze lutho	
26.3 Umlingani wami wagxeka mina ngaleli gcikwane	
26.4 Umlingani wami wafuna ukuhlukanisa	
26.5 Umlingani wami wangilahla	
26.6 Umlingani wami thukuthela	
26.7 Umlingani wami washaqeka kakhulu	
26.8 Umlingani wami waphikisa imiphumela	
26.9 Umlingani wami wabanodlame kimina	
27. Kungani ungamtsheli umlingani wakho?	
27.1 Umlingani wami angangithukuthelela	
27.2 Umlingani wami angangishiya	
27.3 Umlingani wami angasaba ukuthi ngizomesulela ngegcikwane	
27.4 Umlingani wami angacabanga ukuthi angethembekile	
27.5 Umlingani wami angangilimaza	
27.6 Umlingani wami angamisa ukungixhasa ngemali	
Isizathu sokusho	

28. Uzimisele ukumtshela umlingani wako ngesimo sakho, esikhathini esizayo?	Yebo
	Cha
29. Uma uthe yebo, uzimisele unkemtshela nini?	

Appendix 3: Questionnaire-Setswana

<i>Dipotso ka temokrafti</i>	
1. Dingwaga	
2. Bong	Bongtona
	Bongtshadi
3 Maemo	Ga wa nyalwa
	Nyetswe/ nyetse
	Go nna mmogo kwantle ga le nyalo
	Tthalano
	Motlhologadi/ moswagadi
4 Maemo a thuto	Ga wa tsenasekolo
	Sekolosatshimologo
	Sekolo sa sekontari
	Sekolo sa se sekwagodimo
5 Bo morafe	Motho motsho
	Mosweu
	Morwa
	Mointiya
6 Maemo a tiro	O a dira
	Ga o dire
	Tiro ya nakwana
	O i thapile
	Tsena sekolo
7 Tsa bodumedi	Mo keresete
	Tumelo ya se moseleme
	Tumelo ya sehindu
	Tumelo ya sejuta
	Tumelo engwe
<i>Dipotso ka ga go tlhatlhojwa mogarewa HIV</i>	
8 A o ki le wa bolela ka tlhatlhubo ya mogare wa HIV le molekane wa gago	Eya
	Nya
9 Lebaka la tlhatlhubo ya mogare wa HIV ke lefe?	
10 Ke lebaka le lekanakang o itse gore o na le mogarewa HIV	

11 A o itsekamaemo a molekane wag ago a mogarewa HIV	Eya
	Nya
12 Fa karabo ya fa godimo e le eya, maemo a molekane wa gago ke a fe?	O na le mogare
	Ga a namogare
13 Ke lebaka le lekanakang o le mo melemong ya ART	6-12 dikgwedi
	13-18 dikgwedi
	19-24 dikgwedi
	Go feta ngwaga-tsepedi
<i>Maemo a tsa thobalano</i>	
14 Mo kgweding tse tharo tse difetileng a o nne o na le molekane.	Eya
	Nya
15 A o nna le molekane wag ago.	Eya
	Nya
16 Maemo a lona ke a feng a lerato	Molekane
	Molekane wa matsatsi
	Molekane wa nakwana
17 O na le balekane ba bakae mo dikgweding tse fedileng tse-12	Mongwe
	Go feta mongwe
18 Na o dirisa kgotlhopo fa o robala le molekane wa gago?	Eya
	Nya
19 Fa o nale le molekane wa nakwana, a o dirisa kgotlhopo fa o robala le molekane wa nnakwana	Eya
	Nya
<i>Dipotso tsa tshenololo</i>	
20 A o ne wa bolelela molekane wa gago ka maemo a gago a HIV?	Eya
	Nya
21 Fa o nale le molekane wa nakwana, a o ne wa bolela le yena ka maemo a gago a HIV?	Eya
	Nya
22 O moleletse neng molekane wa gago?	Morago ga tlhatlhubo
	1-6 ga dikgwedi
	6-12 ga dikgwedi
	Moragoga ngwaga
	2-5 ya mengwaga
	6 ya megwaga le go feta

23 O boleletse neng molekane wa nakwana?	Morago ga tlhathobo
	1-6 ga dikgwedi
	6-12 ga dikgwedi
	Moragoga ngwaga
24 Fa karabo ya gago ele eya , ke mang.	Mme
	Ntate
	Nkgonne
	Kgaetsadi
	Tsala
	Moruti
	Modire mmogo
	Ba bangwe
25 <i>Lebaka la gore o bolele molekane wa gago ke lefe.</i>	
25.1 Re ne re le botlhe fa re tlhatlhojwa	
25.2 Molekane wa me o nne a ena le nna fa ke tlhatlhojwa.	
25.3 Ke bolelela molekane wa me tsotlhe.	
25.4 Ke batla go sireletsa molekane wa me mo mogare wa HIV	
25.5 Ke batla shegetso go tswa go molekane wa me.	
25.6 Ke batla tshegetso ya matlotlo go tswa go molekane wa me.	
25.7 Ke batla tshegetso ya sedumedi go tswa go molekane wa me.	
25.8 Mabaka a mangwe ke eng	
26 <i>Molekane wa gago o ne a diraeng fa o molelela ka ditlathobo tsa mogare?</i>	
26. Molekane wa me o nne a nna bonolo go nna	
26.1 Molekane wa me o nne a ntshegetsa	
26.2 Molekane wa me o ne a bontsha go se tshwenyega	
26.3 Molekane wa me o ne a ntshola fa ke tshwaeditswe ke mogare	
26.4 Molekane wa me o ne a ntlhala	
26.5 Molekane wa me o ne a fedisa selekane sa rona	
26.6 Molekane wa me o nne a gakala	
26.7 Molekane wa me o nne a tshoga	
26.8 Molekane wa me o nne a gana diteko.	
26.9 Molekane wa me o nne a gakala ka ntlha ya maemo a me	
27 <i>Lebaka la go se bolele ka ga maemo a gago go molekane ke a fe?</i>	
27.1 Molekane a ka nne a gakala	
27.2 Molekane a ka nne a ntlogela	

27.3 Molekane wa me a ka nne a tshoswa ke go tshwaetswa ke mogare	
27.4 Molekane wa me a ka nne a nagana gore ga ke tshepagele.	
27.5 Molekane wa me a ka nne a ntlhagisetsa kotsi.	
27.6 Molekane wa me, a ka se tlo go ntshegetse ka ditshelete	
<i>Maikemisetso a go bua</i>	
28 A o ikemiseditse go bolelela molekane wa gago mo isagweng ka ga maemo a gago.	Eya
	Nya
29 Fa karabo ya gago ya fa godimo e le eya, o tla molelela leng.	

Appendix 4: Informed consent-English

UNIVERSITY OF LIMPOPO (Medunsa Campus)

Statement

Topic: HIV status disclosure to sexual partners and partner reactions to disclosure among clients on antiretroviral treatment at Charlotte Maxeke Johannesburg Academic Hospital

I have been informed about the aims and objectives of the proposed study and I was given the opportunity to ask questions, adequate time was given to me to think about participation. The objectives and the aim of the study are clear and understandable to me. I have not been coerced to participate in the study in any way.

I understand that participating in the study is voluntary and I may withdraw from the study at any time without any reasons.

I also know that this study has been approved by Medunsa Research Ethics Committee (MREC), University of Limpopo at the Medunsa Campus. I am fully aware that the results of this study will be scientific purpose and will be published.

I agree to the study as long as any privacy is guaranteed.

Signature of participant

Place

Date

Statement by the researcher

I have provided verbal information regarding the study project. I agree to answer any further questions regarding the research study project. I shall adhere to the approved protocol.

Name of researcher

Signature

Date

Appendix 5: Informed consent-IsiZulu

UNIVERSITY OF LIMPOPO (Medunsa Campus) ISIZULU CONSENT FORM

Isitatimende esimaqondana nokuhlanganyela kuPhrojekthi Yocwaningo*

Igama loCwaningo

HIV status disclosure to sexual partners and partner reactions to disclosure among clients on antiretroviral treatment at Charlotte Maxeke Johannesburg Academic Hospital

Ngizizwile izinhloso nezinjongo zocwaningo oluhlongoziwe futhi nganikezwa nethuba lokubuza imibuzo nganikezwa nesikhathi esanele sokuphinde ngicabange ngodaba. Inhloso nenjongo yocwaningo kucace ngokwanele kimi. Azange ngicindezelwe ukuthi ngihlanganyele nganoma iyiphi indlela.

Ngiyaqonda ukuthi ukuhlanganyela kulolu cwaningo yohlolo ngokokuzithandela ngokuphelele nokuthi ngingahoxa kulo noma nini ngaphandle kokunikeza izizathu. Lokhu angeke kube nomthelela ekwelashweni okuvamile kwesimo sami futhi angeke kube nomthelela ekunakekelweni engikuthola kudokotela wami ovamile.

Ngiyazi ukuthi lolu Cwaningo ligunyazwe yi-Medunsa Research Ethics Committee (MREC), University of Limpopo (Medunsa Campus) Nginolwazi olugcwele lokuthi imiphumela yalolu Cwaningo izosetshenziselwa izinhloso zesayensi futhi ingashicilelwa. Ngiyakuvuma lokhu, uma nje ingasese lami liqinisekisiwe

Lapha nginikeza imvume yokuhlanganyela kulolu cwaningo.

Igama lesiguli/levolontiya

Indawo

Usuku

Isitatimende somCwaningi

Nginikezele ngolwazi ngomlomo kanye/noma olubhaliwe* maqondana nalolu Cwaningo. Ngiyavuma ukuphendula nanoma yimiphi imibuzo yesikhathi esizayo maqondana Cwaningo/ne kahle kakhulu kangangoba ngikwazi. Ngizobambelela kusivumelwano senqubo esigunyaziwe

Igama loMcwaningi

Isignesha

Usuku

Appendix 6: Informed consent-Setswana

UNIVERSITY OF LIMPOPO (Medunsa Campus) SETSWANA CONSENT FORM

Seteitemente se se ka ga go tsaya karolo mo Porojeke ya Patlisiso*.

Leina la Patlisiso

HIV status disclosure to sexual partners and partner reactions to disclosure among clients on antiretroviral treatment at Charlotte Maxeke Johannesburg Academic Hospital

Ke buisitse tshedimose tso mo ke utlwile maitlhommo le maikemisetso apatlisiso e e tshitshintsweng mme ke filwe t-hono ya go botsa dipotso le go fiwa nako e e lekaneng ya go akanya gape ka ntlha e. Maitlhommo le maikemisetso a patlisiso e a tlhaloganyega sentle. Ga ke a patelediwa ke ope ka tsela epe go tsaya karolo.

Ke tlhaloganya gore go tsaya karolo mo Patlisiso ke boithaopo le gore nka ikogogela morago mo go yona ka nako nngwe le nngwe kwa ntle ga go neela mabaka. Se ga se kitla se nna le seabe sepe mo kalafong ya me ya go le gale ya bolwetsi jo ke nang le jona e bile ga se kitla se nna le tlhotlheletso epe mo tlhokomelong e ke e amogelang mo ngakeng ya me ya go le gale.

Ke a itse gore Patlisiso e e rebotswe ke Patlisiso le Molao wa Maitsholo tsa Khampase ya Medunsa (MCREC), Yunibesithi ya Limpopo (Khampase ya Medunsa) . Ke itse ka botlalo gore dipholo tsa Patlisiso di tla dirisetswa mabaka a saentifiki e bile di ka nna tsa phasaladiwa. Ke dumelana le seno, fa fela go netefadiwa gore se e tla nna khupamarama.

Fano ke neela tumelelo ya go tsaya karolo mo Patlisiso e.

Leina ka moithaopi

Tshaeno ka moithaopi

Letlha

Seteitemente ka Mmatlisisi

Ke tlametse tshedimose tso ka molomo le/kgotsa e e kwadilweng malebana le Patlisiso e.

Ke dumela go araba dipotso dingwe le dingwe mo nakong e e tlang tse di amanang le Tekelelo / Patlisiso ka moo nka kgonang ka teng.

Ke tla tshegetsa porotokolo e e rebotsweng.

Leina la Mmatlisisi

Tshaeno

Letlha

Appendix 7: Letter requesting permission

Ms B.M Letsoalo
P.O. Box 1868
Marlboro
2063
30 June 2012

The Chief Executive Officer
Dr B. Selebano
Private Bag X39
Johannesburg
2000

Re: Permission to conduct study at the wellness clinic Charlotte Maxeke Johannesburg Academic Hospital.

Dear Sir

I hereby request permission to undertake a study on disclosure of HIV status to sexual partners and partner reactions to disclosure among clients on antiretroviral treatment at the wellness clinic of the Hospital

I am currently a student at School of Public Health with University of Limpopo, Medusa Campus, and pursuing Master of Public Health (MPH) degree. As part of the requirement for Master of Public Health, I am required to conduct research and write a dissertation

Kindly note that the research proposal is still going to be reviewed by the research committee at University of Limpopo to make sure that the participant's rights are protected at all times during the research process. I hope that the findings from the study will assist in understanding the, disclosure to sexual partners

Sincerely

Ms B.M Letsoalo
Mobile: 0837379763

Appendix 8: Permission letter from Hospital CEO



GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

CHARLOTTE MAXEKE JOHANNESBURG ACADEMIC HOSPITAL

Office of the CEO
Enquiries:
Ms. L. Mngomezulu
(011) 488-3793
(011) 488-3753
05th October 2012

Ms. B.M. Letsoalo
Master of Public Health Degree
University of Limpopo

Dear Ms. Letsoalo

RE: "HIV status disclosure to sexual partners reactions to disclosure among clients on antiretroviral treatment at Charlotte Maxeke Johannesburg Academic Hospital"

Permission is granted for you to conduct the above research as described in your request provided:

1. Charlotte Maxeke Johannesburg Academic hospital will not in anyway incur or inherit costs as a result of the said study.
2. Your study shall not disrupt services at the study sites.
3. Strict confidentiality shall be observed at all times.
4. Informed consent shall be solicited from patients participating in your study.

Please liaise with the Head of Department and Unit Manager or Sister in Charge to agree on the dates and time that would suit all parties.

Kindly forward this office with the results of your study on completion of the research.

Yours sincerely

Dr. T.E. Selebano
Chief Executive Officer

Appendix 9: MREC clearance certificate

UNIVERSITY OF LIMPOPO
Medunsa Campus



MEDUNSA RESEARCH & ETHICS COMMITTEE
CLEARANCE CERTIFICATE

MEETING: 07/2012

PROJECT NUMBER: MREC/H/208/2012: PG

PROJECT :

Title: HIV status disclosure to sexual partners and partner reactions to disclosure among clients on antiretroviral treatment at Charlotte Maxeke Johannesburg Academic Hospital

Researcher: Ms B Letsoalo
Supervisor: Dr S Madiba
Department: Public Health
School: Health Care Sciences
Degree: MPH

DECISION OF THE COMMITTEE:

MREC approved the project.

DATE: 12 September 2012


PROF GA OGUNBANJO
CHAIRPERSON MREC

The Medunsa Research Ethics Committee (MREC) for Health Research is registered with the US Department of Health and Human Services as an International Organisation (IORG0004319), as an Institutional Review Board (IRB00005122), and functions under a Federal Wide Assurance (FWA00009419)
Expiry date: 11 October 2016

Note:

i) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee.

ii) The budget for the research will be considered separately from the protocol. PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.

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