

**AN INVESTIGATION OF THE UTILISATION OF CONDOMS AMONG PATIENTS ON
ANTIRETROVIRAL THERAPY AT ALIWAL NORTH HOSPITAL AS A PREVENTION METHOD
AGAINST HIV RE-INFECTION**

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DECLARATION

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ABSTRACT

The main objective during the study was to determine the extent to which patients that are on antiretroviral therapy use condoms during sexual engagement as a prevention tool against HIV re-infection, factors associated with non use of condoms and perceptions towards the use thereof. This quantitative study was carried out at Aliwal North Hospital, in the Joe Gqabi District Municipality of the Eastern Cape Province, South Africa. Data was collected using a structured questionnaire with open and closed type questions where a total of 57 participants were given a survey questionnaire to complete. Data was analysed using the tallying method. Results show that the adherence to condom use at last sexual experience by patients on ART was 70%.

Based on these findings, recommendations are made that to enhance condom use for patients on ART, the government and other stakeholders should craft programmes that reinforce and promote public confidence in the effectiveness of condoms, intensify health education campaigns against stigma and promote communication and disclosure among sexual partners. Condom supply and distribution should be changed so that condoms are more easily accessible to high-risk groups. Recognising the pivotal role played by Lay Counsellors, it is important to ensure that the counselling skills of Lay Counsellors in all public health facilities are enhanced so that they can offer a quality service.

OPSOMMING

Die hoof doel van hierdie studie was om vas te stel tot watter mate pasiënte wat op retrovirale terapie is, tydens seks gebruik maak van kondome as voorkomende maatreël, asook die faktore wat assosieer word met die nie-gebruik van kondome en die persepsie van die gebruik van kondome. Hierdie kwantitiewe studie is by die Aliwal Noord Hospital in die Joe Gqabi Distriksmunisipaliteit van die Oos-Kaap Provinsie uitgevoer. Data is met die gebruik van 'n gestruktueerde vraelys met oop en geslote vrae versamel en 57 pasiënte het die vraelys voltooi. Die data is ontleed deur gebruik te maak van die telmetode (Tallying method). Die resultate bewys dat 70% van die respondente wat antiretrovirale terapie ondergaan, kondome gebruik het met hul laaste seksuele omgang.

Gebaseer op hierdie bevindinge word daar aanbeveel om die pasiënte wat terapie ontvang aan te moedig, die regering en ander betrokkenes programme moet ontwerp wat die vertroue van die publiek in die effektiwiteit van kondome help bou, wat gesondheidsopvoeding teen stigmatisering verhoog en wat kommunikasie en openbaring tussen seksmaats aanmoedig. Die verspreiding van kondome moet verbeter word sodat dit makliker beskikbaar is vir hoë risiko groepe. Aangesien leke-raadgewers so 'n belangrike rol speel in openbare gesondheid, moet hulle gehelp word om meer bedrewe te raak en om sodoende 'n gehalte diens te lewer.

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ACRONYMS AND ABBREVIATIONS

AIDS	: Acquired Immune Deficiency Syndrome
ART	: Anti-retroviral Therapy
ARV	: Anti- retroviral
CCMT	: Comprehensive Care, Management and Treatment
HAART	: Highly Active Anti-retroviral Therapy
HIV	: Human Immuno Deficiency Virus
MSM	: Men who have Sex with Men.
NGO	: Non-Governmental Organisation
PLWHA	: People Living With HIV and AIDS
PMTCT	: Prevention of Mother to Child Transmission
PT	: Preventive Therapy
STI	: Sexually Transmitted Infections
TB	: Tuberculosis
VCT	: Voluntary Counselling and Testing
PICT	: Provider Initiated Counselling and Testing
UNGASS	: United Nations General Assembly Special Session on HIV/AIDS

LIST OF FIGURES

Figure 1: Gender of Respondents

Figure 2: Age of Respondents

Figure 3: Distribution of respondents according to Marital Status

Figure 4: Distribution of respondents according to occupation

Figure 5: Distribution of respondents according to level of education attained.

Figure 6: Distribution of respondents according to whether they receive adherence counselling on the use of condoms during visits to ARV Site.

Figure 7: Distribution of respondents according to their understanding of what condoms are used for.

Figure 8: Distribution of respondents according to their understanding of how a sexually active patient on ART can protect himself/herself from HIV re-infection.

Figure 9: Distribution of respondents according to whether they had had sex after the visit to the ARV Site.

Figure 10: Distribution of respondents according to whether they know the HIV status of their partners.

Figure 11: Respondents' responses to whether they are being shown how to use a condom during their visits to the ARV Site.

Figure12: Respondents responses to whether they had used a condom from start to finish during last sexual intercourse.

Figure 13: Respondents responses to their supply of condoms.

Figure14: Respondents' responses on the frequency of their sexual engagement per week.

Figure 15: Respondents' responses to whether there were instances when they wished to engage in sexual activity but had run out of condoms.

Figure: 16: What the respondents did on the occasions when they ran out of condoms but wished to engage in sexual intercourse.

Figure 17: Respondents' responses to how often they use condoms.

Figure 18: Distribution of respondents' responses to when / with whom they have sex without a condom.

Figure 19: Respondents' responses to scenarios in which engaging in sex without a condom would be risky.

Figure 20: Distribution of respondents' responses to scenarios in which they would refuse to have sexual intercourse without a condom.

Figure 21: Distribution of respondents' responses to whether they had engaged in sex without condoms in the last two months.

Figure 22: Distribution of respondents' responses regarding the number of times they had sexual intercourse without condoms in the last two months.

Figure 23: Distribution of respondents' responses regarding matters which make it hard to use condoms during sexual intercourse.

Figure 24: Distribution of respondents' responses in relation to whether they think condoms are really safe and effective in preventing HIV infection.

Figure 25: Distribution of respondents' responses on whether it is still necessary to use a condom even if both sexual partners are HIV positive.

Figure 26: Distribution of respondents' responses on whether they thought an HIV positive person should always use a condom during sexual intercourse.

Figure 27: Distribution of respondents' responses on how a person who is on antiretroviral therapy should practise safe sex.

Figure 28: Distribution of respondents' responses on the reasons for not using a condom at last sex with regular partner.

TABLES

Table 1: Proportion of respondents' responses to the statement: Condoms should be used every time, from start to finish of each sexual encounter.

Table 2: Distribution of respondents' responses on the circumstances under which they would engage in sex without a condom.

Table 3: Thematic distribution of respondents' responses on why ART patients should use condoms during a sexual intercourse.

TABLE OF CONTENTS

1. Chapter One: Introduction	14
1.1 Background	14
1.2 Research Problem	16
1.3 Research Question	16
1.4 Significance of the Study	16
1.5 Aim	17
1.6 Specific Objectives during the Study	17
2. Chapter Two: Literature Review	18
2.1 An overview of the government's response to the HIV/AIDS pandemic.	18
2.2 HIV/AIDS in South Africa	18
2.3 HIV/AIDS Prevention Programmes in South Africa	19
2.4 HIV Prevention Methods	19
2.5 The use of condoms by patients on antiretroviral therapy in countries that are beyond the African Continent.	21
2.6 Use of condoms by ART patients in Sub-Saharan Africa	23
2.7 The use of condoms by patients on antiretroviral therapy in South Africa	25
2.8 Perceptions of condoms and their use among the general population of sexually active individuals.	27
2.9 Factors associated with non utilisation of condoms by ART patients.	28
3. Chapter Three: Research Methodology	30
3.1 Research Design	30
3.2 Study Area	30
3.3 Target Population and Study Population	30
3.4 Sampling	30
3.5 Method of Data Collection	32
3.6 Instruments of Data Collection	32
3.7 Data Quality Control	33
3.8 Data Management and Analysis	33
3.9 Limitations of the study	33
4. Chapter Four: Results and Discussion	34
4.1 Introduction	34

SECTION ONE	34
4.2 (a) Socio-demographic and socio-economic factors related to adherence to ART.	34
4.2 (b) Level of education and knowledge of condoms.	37
4.2 (c) Condom use	40
4.2 (d) Factors associated with non use of condoms	50
4.2 (e) Perception towards condom use.	52
SECTION TWO	56
4.2 Discussion	56
Chapter 5: Summary, Conclusion and Recommendations	61
5.1 Overview of summary, conclusion and recommendations	61
5.2 Summary	61
5.3 Conclusion	61
5.4 Recommendations	62
5.5 Suggestion for further Research	62
6 Bibliography	63
7 Appendix 1 (Questionnaire)	68
8 Consent Form	76

1. Chapter One: Introduction

1.1 Background

The impact of HIV/AIDS worldwide will be felt for many years to come. Promising developments have been seen in recent years in global efforts to address the AIDS epidemic, including increased access to effective treatment and prevention programmes (UNAIDS/WHO, 2006). However, both infection and mortality rates keep on increasing in most regions of the world. According to latest estimates from the UNAIDS Global Report (2010), around 33.3 million adults and 2.1 million children worldwide were living with HIV at the end of 2009. An estimated 22.5 million adults and children were living with HIV in sub-Saharan Africa as at the end of 2009 (UNAIDS, 2010). Although, home to only 10% of the world's population, yet Sub Saharan Africa carries the highest burden of the disease, as 67% of all HIV-positive people live there. Unlike other regions the majority of people living with HIV in Sub-Saharan Africa (61%) are women (UNAIDS/WHO, 2007).

According to the latest report from UNAIDS (2010) it is said that at the end of 2009 there were 5.6 million people living with HIV in South Africa, of those 3.3 million were women and 330,000 were children (ages 0-14).

In recent years, antiretroviral therapy has been developed to prolong the lives of those who are HIV positive. As a response to the HIV/AIDS pandemic, the South African government adopted a dual strategy to mitigate the impact of HIV/AIDS, The first programme consists of the Comprehensive Management, Care and Treatment Programme (CCMT) and support services which offer treatment through antiretroviral therapy to those individuals that have already been infected by the HIV virus (NSP, 2007-2011).

The antiretroviral therapy programme was introduced in November 2003, to target all HIV positive individuals who had a CD4 count of 200 and below (NSP, 2007-2011). At the end of 2007 there were 460,000 people on antiretroviral treatment, which is the equivalent to 28% coverage, UNAIDS, (2008), but by end of November 2009, the public ARV treatment programme reported approximately 919,923 people on treatment, with the private and non-governmental organisation (NGO) sector supporting an additional estimated 51,633 people (South African UNGASS Report, 2010).

The second programme is HIV Prevention Programme which is a programme designed to focus on those individuals who are not infected by HIV/AIDS. South Africa's primary prevention goal is to reduce the national HIV incidence rate by 50% by 2011. As such, there has been a marked injection of resources and a concerted

effort made by government, development partners and civil society in this area (UNAIDS Report, 2010). Exposure to South Africa's HIV prevention communication through media campaigns is high, with 80% of those surveyed knowing of at least one (loveLife, 2009).

HIV in South Africa is transmitted predominantly heterosexually between couples, with mother-to-child transmission being the other main infection route. Drivers of the epidemic in South Africa are intergenerational sex, multiple concurrent partners, low condom use, excessive use of alcohol and low rates of male circumcision (S.A.UNGASS Report, 2010).

As part of the HIV Prevention programme, the government has a free condom distribution programme whereby 283 million male condoms were distributed in 2008 and 4.3 million female condoms were distributed in the same period (UNAIDS Report, 2010).

In the same report by UNAIDS (2010) it has been mentioned that condom use among South Africans in general has been on the rise since 2002. The 15-24 age groups show the highest percentage using condoms, at 73.1% for females and 87.4% for males. Interestingly, a sharp increase was noticed in condom use among 25-49 year olds when comparing 2005 to 2008. Males of this age range increased their condom use by 21% and females by 29%. Again, sharp increases in condom use were noted in both males and females in the 50+ age range, increasing by 31% and 20% respectively.

The increase in the use of condoms is commendable, however, this is a start, what is worth checking is whether condoms are used consistently and correctly every time during sexual intercourse. In addition, it may be desirable to investigate whether patients who are on antiretroviral therapy are also using condoms as a prevention tool against HIV re-infection.

1.2 Research Problem

Initiation of antiretroviral therapy to HIV positive patients is crucial, but, equally important is to ensure that one avoids being re-infected by HIV, contracting STI and unwanted pregnancy (Ata Van Dyk, 2001). Studies show that ART use is associated with significantly higher pregnancy rates among HIV infected women in Sub-Saharan Africa (Myers et al, 2010). However, what we do not know is the extent of utilisation of condoms as prevention tool for patients on ART, especially those patients at Aliwal Hospital Wellness clinic. Little is known about the associated challenges.

1.3 Research Question

What is the extent of condom utilization among ART patients at Aliwal North Hospital as an HIV Prevention tool?

1.4 Significance of the study

The aim of the study was to generate new knowledge on the extent of utilization of condoms by patients on ART and challenges associated with non-utilization by patients on ART at Aliwal Hospital.

It is hoped that the following questions will be answered:

What is the extent of utilization of condoms by patients on ART at Aliwal Hospital and what are the factors associated with the non-utilisation thereof?

The answer to these questions

- Will confirm whether the patients on ART at Aliwal Hospital use condom,
- Shed light on challenges faced by patients who are on ART and use condom;
- Shed further light on intervention solutions to challenges faced by patients on ART who don't use condom.

Furthermore, the findings of the study may have implications on government policy and practice, and the findings may be used as an assessment tool for evaluating the effectiveness of condom use among patients on ART.

1.5 Aim

The aim of the study is to understand the ART patients' perception of condom use and the utilisation thereof as an HIV Prevention tool.

1.6 Specific Objectives during the study

- To analyse the perception of ART patients of the use of condoms as a prevention tool.
- To identify gaps between the perception of ART patients and the requirements of the HIV/AIDS Prevention Programme in relation to consistent and correct use of condoms.

- To identify factors associated with non utilization of condoms before engaging in sexual intercourse by ART patients at Aliwal North.
- To provide guidelines for patient-tailored condom adherence programmes for ART patients.

2. Chapter Two: Literature Review

2.1 An overview of the government's response to the HIV/AIDS pandemic.

HIV/AIDS continues to cause untold suffering in South Africa, as it does in many countries in the Southern Africa region. However, the past few years have seen some notable progress in the fight against HIV/AIDS in the country (HSRC, 2010). South Africa is committed, through the multi-sectoral National Strategic Plan for HIV&AIDS and STIs 2007-2011 (NSP), to implementing strategic interventions guided by various international, continental and regional commitments including the Millennium Development Declaration (UNGASS, 2010). On December 1, 2009, the president of South Africa, Mr. J.G. Zuma made important policy announcements regarding expanding access to antiretroviral treatment to specific groups of patients, namely pregnant women and people with dual HIV and TB infection with CD4 counts of 350 or less. In addition, all HIV-infected infants will be started on treatment, irrespective of CD4 count. The number of persons who are receiving treatment at public health facilities had reached approximately one million by the end of 2009 (UNGASS, 2010). South Africa bears the highest burden of the HIV/AIDS epidemic in the world, with about 5.6 million people estimated to be infected (UNAIDS, 2010).

2.2.HIV/AIDS in South Africa

According to the 2010 UNAIDS Global Report on AIDS, South Africa has the highest population of HIV infections and seems to be the epicentre of the HIV/AIDS pandemic. An estimated 5.6 million people were reported to be living with **HIV** and **AIDS** in South Africa in 2010, more than in any other country. Furthermore, in high-prevalence countries (those with more than 10% of adults infected: Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Swaziland, Zambia and Zimbabwe), AIDS is the leading cause of death (MSF, 2009). In South Africa, it is believed that in 2008, over 250,000 South Africans died as a result of AIDS (UNAIDS, 2009).

Notwithstanding programmes to improve health services, South Africa is one of the few countries in the world where child and maternal mortality has risen since the 1990s (Lancet, 2008). AIDS is the largest cause of maternal mortality in South Africa and also accounts for 35% of deaths in children younger than five years (HSRC, 2010). National prevalence is around 11%, with some age groups being particularly affected. Almost one-in-three women aged 25-29, and over a quarter of men aged 30-34, are living with HIV. The prevalence of HIV among those aged two and older also varies by province with the Western Cape (3.8%) and Northern Cape

(5.9%) being least affected, and Mpumalanga (15.4%) and KwaZulu-Natal (15.8%) at the upper end of the scale (UNAIDS,2009).

2.3.HIV/AIDS Prevention Programmes in South Africa

An HIV prevention approach based solely on one element does not work and can hinder the AIDS response. The South African government understands that in order to wage any formidable battle against the HIV and AIDS pandemic, there has to be a multi-sectoral approach. The fight against HIV/AIDS pandemic is waged on three fronts: HIV Prevention, HIV Treatment and Care and Support: (NSP: 2007-2011).

South Africa has programmes to manage all three levels of intervention. Two main HIV prevention strategies employed to date have been focused on safe sexual practices including the use of condoms especially in casual or commercial sex and the early detection and treatment of sexually transmitted illness (Cohen et al, 1994). The national HIV prevention programme focuses on the Prevention of Mother To Child Transmission (PMTCT), AIDS Awareness Campaigns which include the HIV Counselling and Testing Campaign (HCT) aimed at testing 12 million people for HIV (12 million people), Condom use and distribution, HIV and Sex Education, and Circumcision (UNGASS, 2010).

2.4 HIV Prevention Methods

It has been alluded to before, that to accomplish reduction of HIV transmission, prevention strategies must include overlapping behavioural and biologic approaches. For this reason there are a number of large scale communication campaigns related to raising awareness of and the prevention of HIV and AIDS in South Africa; Khomanani, Soul City, LoveLife and other organisations are involved in mass media campaigns to spread HIV prevention awareness and education in the hope of effecting behavioural change, Scott and Harrison (2009).

2.4.1 The distribution of Female and Male condoms in South Africa

HIV/AIDS makes the largest contribution to the burden of disease in South Africa and consistent condom use is considered a key component of HIV-prevention efforts. The promotion of condoms has been used by the Department of Health to encourage sexually active people to use condoms to prevent HIV and other sexually transmitted infections (STIs). Scientific evidence shows that both male and female condoms used correctly and

consistently, can reduce the risk of sexual transmission of HIV by 80 to 90 percent (IAS Media Release, 23 Nov 2010). Pushing this point further, the UNAIDS (2010) Report, reported that correct and consistent condom use has been found to be greater than 90% effective in preventing transmission of HIV and other sexually transmitted infections.

Approximately 400 million male condoms are distributed annually on a demand b by the Department of Health. Whilst access to male condoms is perceived to be relatively high, the same cannot be said for female condoms, only 4.3 million female condoms were distributed in 2008, (HSRC, 2009).

Even though male condoms are generally accessible, they are not sufficiently available to some of the groups that need them most (UNGASS, 2010). For example, Local studies among men who have sex with men (MSM) report that condom availability is inadequate (Rispel and Metcalf 2009) furthermore, condom distribution in prisons is limited and the availability of female condoms is very limited for high risk groups.

Whereas it has been acknowledged that there is a greater need of female condoms, the National Department of Health (NDOH) distributes only about 3 million free female condoms per year, (LoveLife, 2009) and even then, they are only available in family planning settings.

The availability of condoms for use in South Africa is commendable, but there is a need to distribute more condoms for females furthermore, a distribution system has to be developed for all high risk groups.

To intensify HIV prevention programmes, the South African government launched a massive HIV counselling and testing campaign that aims to test 15 million South Africans between April 2010 and June 2011. To support this campaign the government is committed to expanding male condom distribution to 2.5 billion in 2010 (UNAIDS, 2010). Although expanding, free female condom distribution is still much smaller, mainly due to the very high cost of female condoms (Cleland et al, 2004).

2.4.2 Condom use as an HIV prevention Tool in South Africa

Condom use in South Africa is growing with the percentage of those using a condoms during their last sexual encounter increasing from 27% in 2002, and 35% in 2005 to 62% in 2008. Younger people show the highest rates of condom use which bodes well for the future of prevention, and could explain the decline in HIV prevalence and incidence among teenagers and younger adults: UNGASS, (2010).

Similarly, the *Economist*, an online newsletter reported on 10 June 2009, that new data from Human Science Research Council suggests that the epidemic may be levelling off. The report further highlighted that the proportion of the population who reported using a condom at their most recent sexual encounter has jumped dramatically, most notably among young people. The increase in the rate of condom use was attributed to the growing understanding that condoms are a useful prevention measure (www.economist.com).

Concurring with the above findings, the report by the National Communication Survey on HIV/AIDS in 2009 also found that 15% of married men and women used a condom at last sex compared to 74-83% men and 55-66% of women who used a condom when they had casual sex or one night encounters, identifying the need for prevention programmes to further target married couples.

Finally, the Human Science Research Council (2009), reported that, the proportion of adults reporting condom use during the most recent episode of sexual intercourse rose from 31.3% in 2002 to 64.8% in 2008 (Shisana, et al., 2009).

The above results which reflect an increase in the proportion of people who reported using condoms, have also been confirmed by the latest UNAIDS Report, in which it was reported that eleven countries in Sub-Saharan Africa reported levels of 75% or higher among both men and women for condom use at last higher-risk sex (UNGASS, 2010). South Africa was also included in the list of those countries. It can be deduced from the above studies that between 2002 and 2009, there has been a significant increase in the proportion of the people who are sexually active and used condoms during last sexual activity.

2.5 The use of condoms by patients on antiretroviral therapy in continents that are beyond Africa.

According to Ruxrungtham (2007) apart from the beneficial clinical effects of HAART, treatment advances may have unintended effects on sexual behaviour. The use of antiretroviral (ART) may influence the type and extent of risk behaviour for HIV transmission. It may be associated with either riskier or safer sexual behavior for reasons such as the recovery of health and sexual activities following a period of illness (Ducker et al, 2004).

HIV infected individuals on therapy and who have undetectable viral loads, may feel confident that they cannot infect others, thus reducing the likelihood of practising safe sex (Crepaz, Hart, Marks, 2004). In fact, a significant association was found between optimistic beliefs about ART and decreases in condom use over time (Huebner, Rebchook, Kegeles, 2004). A study of non-adherence to ART and unsafe sex with sero-discordant partners in Brazil, showed that for heterosexual women, non-adherence and unsafe sex were positively

correlated (Peretti et al, 2006). Kerrigan et al, (2006) found that the availability of ART was taken as a rationale for unsafe sex among minority participants (heterosexual women, heterosexual men, and men who had sex with men).

In a Swiss HIV Cohort Study conducted in 2000, 4948 individuals were registered in the study, and 4723 (95%) completed the questionnaire. Of these individuals, 12% reported unsafe sex, 78% received antiretroviral therapy, and 25% had optimal viral suppression. During the preceding 6 months, 55% of individuals had stable and 19% had occasional partners, and 6% had both types of partners. Sexual intercourse was reported by 82% of individuals with stable and 87% of individuals with occasional partners, and of those reporting sexual intercourse in each group, 76% and 86%, respectively, said that they always used condoms

In relation to condom use by ART patients, reports from WHO, UNAIDS and other organisations seem to suggest that there is an upswing in the use of condoms. This assertion has also been made by researchers, for example:

A study conducted in Pune and Delhi in India by Sarna et al (2004), on the question relating to 'condom use with a regular partner', it was reported that 89% of respondents who reported sex with a regular partner reported using a condom at last sex. In addition, all respondents who reported sex with a casual partner or sex worker reported using a condom at last sex with that type of partner. Another key point that was observed was that even though the majority of respondents who reported sex with a casual partner or sex worker did not know their partner's HIV status nor disclose their own status, all reported using a condom at last sexual contact with these partners (Sarna, 2004).

A study in Thailand by Lertpiriyasuwat et al (2006), to investigate sexual risk behaviour among patients on antiretroviral therapy, reported that a substantial number of HIV-infected patients were engaging in casual sex with commercial or non-regular partners, and condoms were not always used with partners, including their regular partners. A previous study in Thailand showed that consistent condom use rates in partners of HIV-infected people receiving ART were lower than 65%, (Jitsabuy, 2003).

In a study by Kozal et al (2004) to determine whether HIV-positive patients receiving antiretroviral therapy (ART) and who engage in HIV transmission behaviours may harbour and transmit drug-resistant HIV. Among a diverse population of 333 HIV-positive patients, 75 (23%) had had unprotected sex during the previous 3-months, resulting in 1126 unprotected sexual events with 191 partners of whom 155 were believed by patients

to be HIV-negative or of unknown status. Eighteen of the 75 (24%) had resistant HIV and 207 unprotected sexual events, exposing 18% of the HIV- or status unknown partners. The study concluded that a substantial minority (23%) of patients in clinical care engaged in HIV sexual transmission risk behaviour.

However, some studies found that unprotected sex had increased in HIV-infected persons who believed that receiving HAART or having an undetectable viral load protected against transmitting HIV (Kravcik *et al*, 1998; Wilson and Minkoff, 2001; Ostrow *et al*, 2002; Tun *et al*, 2003).

Based on the findings of these studies it can be concluded that whereas in some countries sexual risk behaviour among patients on antiretroviral therapy as it relates to consistent condom use has improved, other countries are lagging behind and an effort must be made to change sexually risky behaviour.

2.6 Use of condoms by ART Patients in Sub-Saharan Africa

According to Smith (2007), data from around the world suggest that married women's greatest risk of contracting HIV is through sexual intercourse with their husbands. Similarly, in a study conducted by Carpenter *et al* (1999) in relation to the HIV sero-status of partners it was discovered that, HIV discordance among married and cohabiting couples in Sub-Saharan Africa is high, ranging from three to 20 percent in the general population and 20 to 35 percent in couples where one partner seeks HIV services. However, a 2007 review of evidence of the impact of ART on sexual behaviour in developing countries yielded only three studies, in three African countries, (Côte d'Ivoire, Kenya and Uganda). In each study, condom use at last sexual intercourse was significantly higher among ART patients compared to non-ART patients (Moatti *et al*, 2003).

In the Côte d'Ivoire study, condom use at last sex was 80 percent for ART patients versus 59 percent for non-patients, regardless of partnership type. In a similar study conducted by Mola (2006) in Mozambique, it was reported that the use of condoms increased among men and women living with HIV who underwent VCT.

Bateganya *et al*, (2005) reported 71 percent condom use at last sex with a spouse for ART patients, versus 47 percent for non-patients. Research findings seem to suggest that safer sex behaviour through condom use has increased amongst ART patients or HIV positive patients. However, in another study on 'Risk behaviour and HAART', the study discovered that more than 40 percent of all participants in the study did not know the HIV status of their regular partners Sarna, (2008).

In a comparative study of people living with HIV or AIDS on HAART and those receiving preventative therapy (PT) in Kenya it was found that participants receiving HAART were more likely to report condom use at last sex and consistent condom use with regular partners than those receiving preventive therapy (PT). In the study it was also found that there were fewer multiple and casual partners among PLWHA receiving HAART compared with those receiving PT. This is consistent with findings from Côte d'Ivoire. While the available evidence indicates that ART is associated with significant behaviour changes, it must be highlighted that knowledge that condoms prevent HIV transmission or re-infection does not in itself always lead to action and the decision to use a condom is more complex than the simple health education message implies. Using or not using a condom is not simply a question of safer sexual behaviour; it is the outcome of a negotiation between potentially unequal partners.

A similar finding was arrived at in a cohort study in Mombasa Kenya (2003) of HIV-positive persons receiving antiretroviral therapy (ART) for 12 months. The results revealed no increase in unsafe sex. However, there remained a risk of HIV transmission as a result of unprotected sex with an HIV-negative or unknown status partner (www.popcouncil.org).

However, in an analysis of condom use in 20 countries in Sub-Saharan Africa by Agbesu (2003), it was reported that levels of condom use are still very low and vary widely. The proportion of persons who reported using condoms during their last sexual encounter ranged from 6% to 28% among men and 1% to 9% among women (Agbesu, 2003).

A similar conclusion was made in a study by Akinyemi et al (2010). Condom use reported at ART initiation among men was even lower than the 28% found among men in the Nigerian national survey in 2005. The Federal Ministry of Health (2007) reported that, in Nigeria, condom use remains alarmingly low at 25% and 11% for sexually active males and females respectively (Federal Ministry of Health, 2007).

A study conducted, in Mombasa, Kenya in 2005 showed opposite results to those of Nigeria. No increase in unsafe sex was noted and knowledge of partner's HIV status had increased significantly (www.popcouncil.org). In this study lower risk behaviour (e.g., multiple partners, sex with casual partners, inconsistent condom use) was found among PLHA receiving HAART compared to PLHA on PT.

In a study conducted by Kebede et al (2007) at Jimma University Specialised Hospital in southwest Ethiopia in order to estimate the prevalence of unprotected sex and to identify factors associated with condom use among 705 HIV-positive individuals, it was found that at least a quarter of those who were positive had unprotected sex with a

risk partner. The other key finding of the analysis is the significantly higher likelihood of unprotected sex with partners of unknown sero-status than with those whose status is known. These results raise considerable public health concerns regarding the potential for HIV and STI transmission as well as HIV re-infection among and from those who are already infected.

Studies relating HAART to an increase of unprotected sex have had mixed results. Nevertheless, the above findings illustrate the disturbing evidence of continued sexual risk-taking among HIV-positive patients, specifically the intermittent use of condoms during sexual engagement.

2.7 The use of condoms by patients on Antiretroviral Therapy in South Africa

As a result of the success of highly active antiretroviral therapy (HAART) in dramatically decreasing morbidity and mortality from HIV disease, many HIV-infected persons are now living longer, healthier, and more sexually active lives. However, unprotected sex by people living with HIV/ AIDS (PLHA) is an area of concern because they risk transmitting HIV to sero-discordant partners and re-infecting themselves with new, drug-resistant strains of the virus.

Also of concern is that recent research has found a reduction in protective and preventive behaviours among HIV-positive persons once their physical condition has improved in response to antiretroviral therapy (Chen et al. 2002; Katz et al. 2002; Van der Ven et al. 2002). Although these findings come largely from studies conducted on Western gay men, other research has documented the challenges associated with the consistent practice of HIV/STI-related protective and preventive behaviours among HIV-positive persons.

In a review of studies on sexual risk behaviour among PLHA by Crepaz et al. (2002) it is shown that a considerable percentage (between 10 and 60 percent, depending on the specific sex act) of sero-positive individuals continue to engage in unprotected sexual behaviours that place their partners at risk of infection and place themselves at risk of contracting secondary infections (e.g., syphilis, gonorrhoea, herpes). However, in a second, more recent meta-analytic review of studies by Crepaz et al. (2004) it was found that HIV-positive persons receiving HAART did not exhibit increased sexual risk behaviour, even when therapy achieved undetectable viral loads.

Whereas, in a study conducted by (Maharaj and Cleland, 2004) among married and cohabitating couples in KwaZulu-Natal, only 43 percent of men and 60 percent of women found it acceptable for a married woman to request that her husband use condoms, in a similar study conducted by Bunnell et al, (2005) condom use was found

to be the most common and a preferred method of HIV prevention. Some couples transitioned to condom use after failing to abstain from or reduce their frequency of sex.

A study by Olley et al (2005) was conducted to examine the prevalence of unprotected sex, other sexual risk behaviours, and factors associated with unprotected sex among men and women recently diagnosed with HIV in South Africa. It was reported that 54.4% of those sexually active in the 6 months preceding the study, had not used a condom during the most recent intercourse.

In a cohort study conducted at both rural and urban primary health care clinics in South Africa which involved 1544 men and 4719 women enrolled from 2003 to 2010, fears that the use of HAART would make HIV positive people feel better, have more sex and thereby potentially increase infection to others were rebuffed. The findings of the study proved that perception to be unfounded. (www.plusnews.org).

Similarly, in a study by Eisele and colleagues (2008), changes in sexual risk behaviour over the first year of antiretroviral therapy among a cohort of patients in Cape Town, South Africa initiating treatment in five public facilities in 2006 and again one year later. Unprotected sex at last sex among patients on antiretroviral therapy decreased significantly from a baseline of 44.7 to 23.2% one year later, regardless of partner status.

Furthermore, Kiene et al (2008) undertook a study to assess the prevalence of unprotected sex and to examine the association between alcohol consumption before sex and unprotected sex among HIV-positive individuals in Cape Town, South Africa. During the study which yielded 3035 data points, 58 HIV-positive women and 24 HIV-positive men drank an average of 6.13 drinks when they drank and reported 4927 sex events, of which 80.17% were unprotected. More than half (58%) of unprotected sex events were with HIV-negative partners or with partners with unknown HIV status.

From the findings of the studies highlighted above, it can be safely concluded that there has been an improvement in the use of condoms by patients who are on antiretroviral therapy in South Africa. However, more is still need to be done to encourage and create a culture of condom use by ART Patients.

2.8 Perceptions of condoms and their use among the general population of sexually active individuals.

The scope and direction of the HIV epidemic in South Africa will be determined, in large part, by sexual risk behaviours of the infected and uninfected populations (Ibom, 2009). The most effective way to slow down the spread of HIV/AIDS is to reduce the rate of transmission of infected to uninfected people and re-infection of those who are already infected by HIV. Knowing about condoms and using them correctly and consistently is the best way of remaining HIV negative, since the most common way of being infected is through unprotected sex with someone who has HIV (www.consumerreports.org), but there are certain perceptions of condom use.

In a study conducted online in 1996 by US Newswire nationally in America to determine the perception of sexually active individuals to condom use, the use of condoms was perceived by some as “showing that you are a concerned and caring person”, but others interpreted it as “showing that you think that your partner has AIDS.” The study is important because it provides valuable information about how people view condoms and their use. There is a strong correlation between condom perception and their use by sexually active individuals and this has extended implications in relation to the transmission of HIV and re-infection by sero-discordant partners. This also has a bearing on the transmission of sexual illnesses and unwanted pregnancy (US Newswire, September; 2002, p.3).

In a study conducted on the reasons for condom use among young people in KwaZulu Natal, 59 % of the 2069 respondents said they had used a condom at last sexual intercourse, and the main reason for use (cited by 64 % of users) was protection against both pregnancy and HIV infection (Maharaj, 2006). Two-thirds of respondents thought that becoming or making someone pregnant in the next few weeks would be a big problem; fewer than one in five viewed their risk of HIV infection as medium or high. Among both sexes, young people who would consider a pregnancy highly problematic were more likely to use condoms than their counterparts who would view a pregnancy as no problem (odds ratios, 1.4–2.3).

In sharp contrast, young men and women who perceived themselves as having a medium to high risk of HIV infection were less likely to use condoms than their counterparts who perceived themselves as being at no risk (0.2–0.3). The findings of this study seem to give a clue as to the probable reasons for the high prevalence of HIV transmission in KwaZulu Natal. In terms of their perception of risk of infection, fewer than one in five did not see the non-use of condom as being risky. Some studies in South Africa have found that condom use is highly correlated with social and demographic characteristics such as age, education and race (Morrone et al, 2002). In addition, research in other African settings has documented that individuals who have multiple sexual partners are more likely than others to report high levels of condom use: (Adetunji & Meekers, 2001). The same conclusions

were drawn in a study in Zimbabwe by Adetunji & Meekers, (2001) that condom use increased with number of sexual partners, however, according to Anderson et al, (1999) the use of this method is also highly influenced by the length and intensity of relationships: The longer a relationship lasts, the greater the likelihood that condom use will be discontinued.

In the same study it was found that 59% of young people were protected from both pregnancy and HIV the last time they had sex, 53% because they used condoms alone and 6% because they used condoms plus another method. Some 11% were protected only from pregnancy because they used only a contraceptive method (other than the condom), and 30% did not use any method at all. The data suggest that a higher proportion of men than of women used condoms only, and a higher proportion of women than of men used another method only (Maharaj, 2006).

2.9 Factors associated with non utilisation of condoms by ART Patients

In a study published by Owuor (2009) which was aimed at establishing factors associated with non utilisation of condoms amongst black and minority groups ART patients in North West London, it was reported that different perceptions and expectations of sexual relationships between male and females are the leading barriers to condom use. In another study conducted in Kent by the same researcher, it was found that for women on ART, emotional vulnerability was seen as a barrier to condom use. Women were also willing not to use condoms in what they thought was a mutually monogamous relationship. Women were also unaware of their partners' other relationships or mistakenly hoped the relationships were permanent rather than casual.

Other factors that were associated with the non use of condoms were the type of relationship in question, perceptions around reduced pleasure, interrupted sex, lack of trust, and limited knowledge about condoms and the prevention of STIs. Condoms were thought to be necessary for sex with non-regular partners, but not within the context of trusted relationships or after sexual health check-ups (Owour, 2009).

It must be acknowledged though, that knowledge that condoms prevent HIV transmission does not in itself always lead to action, and the decision to use a condom is more complex than the simple health education message implied (Mash, 2010). In some cultures, sex in a marriage context is seen as a marital obligation for women, and therefore women may be compelled to engage in sex without the protection of condoms.

Ironically accurate information about HIV and AIDS can also cause ART patients to practise unsafe sex; available evidence suggests that a low viral load may reduce the level of infectiousness of HIV-positive persons receiving HAART (Quinn, 2000). As this information moves to the public domain, it may influence people's beliefs about HIV transmission and lessen concern about engagement in unsafe sex. People who hold these beliefs are more likely than their counterparts to engage in unprotected sex.

According to Hearst and Chen, (2003) consistent use of condoms requires not only long-term individual commitment but a reliable distribution system to provide condoms to people who often lack other basic needs.

In Varga's study (1997) of youth from Durban, South Africa among women who discussed condoms, 42% said that their partners usually refused condoms because they made sex less pleasurable, and therefore condoms may not be used in order to please one's partner. Furthermore, in Pettifor's study (2004), women who experienced forced sex are 5.8 times more likely to use condoms inconsistently.

It could therefore be argued that sexual encounters may be sites of struggle between the exercise and acceptance of male power, male definitions of sexuality and women's ambivalence and resistance (Lear, 1995). Lastly, owing to gender imbalance, decisions to use condoms were controlled by males, with the tacit agreement of their female partners (Harrison, 2001). Nevertheless, the use of condoms by ART patients has to be encouraged until condom-use becomes a norm.

Chapter 3: Research Methodology

3.1 Research Design

The aim during the study was to understand the perception of patients on ART to condom use and the utilisation thereof as an HIV Prevention tool.

Monnette et al, (1990) a research design as a detailed plan outlining how observations will be made.

It is a plan followed by the researcher as the project is carried out; it will always address itself to certain key issues, such as who will be studied, how these people will be selected, and what information will be gathered from or about them.

3.2 Study Area

The study was conducted at Aliwal North District Hospital, at Maletswai Local District Municipality which is one of the three local municipalities which form part of Joe Gqabi District Municipality in the province of the Eastern Cape. The catchment population for Aliwal North is approximately 29 000 people and has an HIV prevalence of 9%. There are five primary healthcare clinics that serve as feeders to the hospital. The Aliwal North Hospital has a well-functioning Antiretroviral Therapy (ART) Clinic with about 800 patients on ART.

3.3 Target Population and Study Population

A target population is defined as the population under study, the population to which the researcher wants to generalize the research findings (Talbot 1995). Whereas the target population for this study was all HIV and AIDS patients, the study population was HIV positive patients who are on ART at Aliwal North Hospital.

3.4 Sampling

Sampling is selecting some of the elements of the population so that the researchers can draw conclusion about the entire population.

3.4.1 Sample Population

Population in research methodology is the total group of subjects that need to be assessed if the views of everyone in a particular situation are to be measured (Grein et al, 2004). In this study, the sample population consisted of males and females who are HIV positive and on ART at Aliwal North Hospital.

3.4.2 Sampling Method and Sampling Size

The research used stratified random sampling. Stratified random sampling refers to a sampling procedure where the population elements are divided into sub-populations or strata by age.

A stratified random sampling of sexually active males and females who are on ART at Aliwal North hospital was undertaken. From a total of approximately 800 ART patients who are currently accessing ARVs at the hospital, a random selection of 30 females and 30 males was conducted. Thirty (30) female participants completed the questionnaire and only seventeen (17) males. This equates to a response rate of 100% for women and 57% for men, the total response rate was 78%.

3.4.3 Inclusion and Exclusion criteria

The criteria used to determine which participants would and would not be eligible to take part in the study was defined through the use of inclusion and exclusion criteria.

The inclusion criteria:

- i) Male and female participants who are on ART at Aliwal North Hospital.
- ii) The ART patients have to have been on ART for more than five months.
- iii) Only sexually active ART patients will participate.
- iv) The age of the participants is eighteen years old and above.

The exclusion criterion:

- i) Mentally disabled patients, who are on ART at Aliwal North Hospital, were excluded from participating in the study.

3.4.4 Ethical Considerations

These were:

- i) Permission to carry out the research study was sought from Stellenbosch University, Department of Health, Ukhahlamba District of Health and Aliwal North Hospital.
- ii) Informed consent was sought from all the study participants.
- iii) Confidentiality, anonymity and privacy were fully guaranteed.
- iv) Counselling services would be provided for traumatised participants.

3.5 Method of Data Collection

Both quantitative and qualitative methods of data collection were used.

According to Christensen (2004) the quantitative method is one that collects some type of numerical data to answer a research question. The other method is the qualitative method which Christensen (2004) defines as an interpretive, multi- approach method that investigates people in their natural environment.

3.6 Instruments of Data Collection (Research Tools)

The Quantitative Approach was used when developing the Questionnaire. Data was then collected using a structured questionnaire with both open and closed questions. According to Christensen (2004), an open-ended question enables respondents to answer in any way they please, whereas a close-ended question requires respondents to choose from a limited number of predetermined responses. The benefit of close-ended questions is that they are easy to standardise, and the data thereof lend themselves to statistical analysis.

The questionnaire consisted of four sections, namely:

- i) Background and biographical information,
- ii) Knowledge about and use of condoms as a prevention method,
- iii) Factors associated with non-use of condoms, and
- iv) Perception of condom use.

The qualitative approach was used to conduct record analysis of ART patients. The source of documents for analysis was the ART Patient Register which is a register that has the names of all patients who are accessing ART services at Aliwal North Hospital. These names were then used for sampling purposes.

3.7 Data Quality Control

The research assistants were shown how to administer the questionnaire. After the respondents had completed the questionnaires, the questionnaires were collected and handed to the researcher who then kept them in a lockable cabinet. To protect access to electronic data, a password was used.

3.8 Data Management and Analysis

The results of the survey questionnaire were sorted and captured manually into an excel spreadsheet, using a tallying method to determine frequency of responses.

All the information collected from the questionnaire was analysed and the results were presented using charts, graphs and media tables.

3.9 Limitations of the study

The limitation was the fact that the sample size is not big enough for the results of the study to be generalised to the entire population, nevertheless, the study was helpful in assisting the research team and the Department of Health to get insight into the subject of inquiry. In addition, the selection plan went awry. The plan was to select randomly 30 females and 30 males. The reason for choosing 30 participants from each gender was to ensure equal representation and thus eliminate gender bias. Even though consent was received from thirty males, only 17 males were prepared to complete the questionnaire on the day of the survey, others claimed to be rushing off elsewhere. This was understandable as it was in mid- December when the questionnaire was completed and by then people were busy preparing for Christmas.

Chapter Four: Results and Discussion

4.1. Introduction

This chapter presents results of qualitative and quantitative findings. It is divided into two sections. Section one incorporates the findings of the study which are divided into five themes:

- a. Socio-demographic and Socio- economic information of respondents
- b. Level of education and knowledge of ARV drugs,
- c. Condoms use by patients on antiretroviral therapy (ART),
- d. Factors associated with non-use of condoms and
- e. Perception of condom use.

Section two covers a brief discussion of the findings.

Section One

4.2. (a) Socio-Demographic and Socio-economic factors related to adherence to ART.

4.2.1 Gender of respondents

Sixty patients who are on antiretroviral therapy were requested to participate in the study, 47 completed the questionnaire. Of the 47 patients, 64% were females and 36% were males. (See Figure: 1 below).

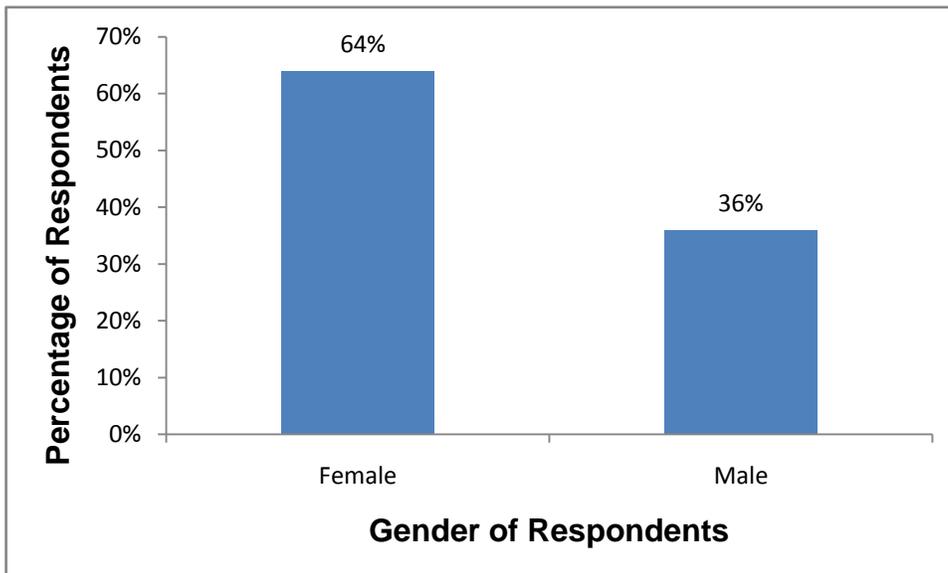


Figure 1: Gender of Respondents

4.2.2 Age of respondents

The majority of participants (21) 45% were in the 31-40 age bracket, followed by the 21-30 age group at (11) 23%. The 41-50 age group accounted for (9) 19%, the age group between 51-60 and 60 and above accounted for (4) 9% and (1) 2% respectively. The last respondent (1) 2% was from the age group between 18-20 years. (See Figure: 2 below).

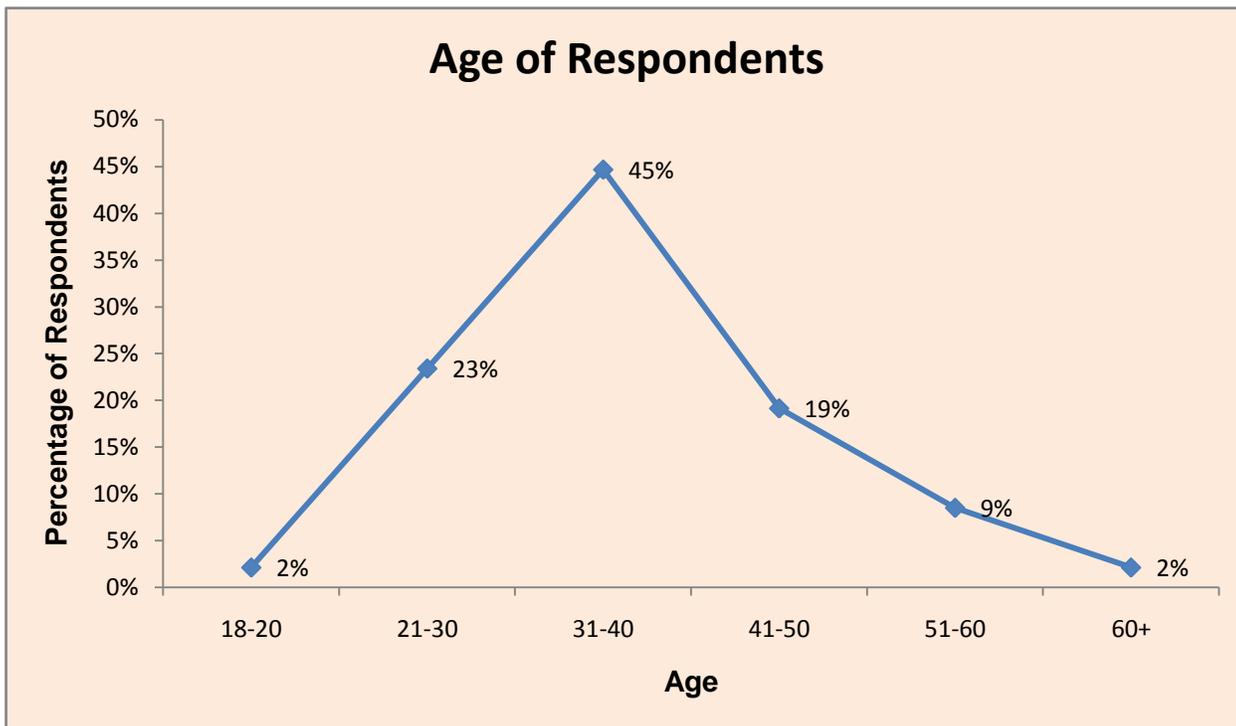


Figure 2: Age of Respondents

4.2.3 Marital Status of the Respondents

Twenty-six (56%) of the respondents were single, 8 (17%) were married, 6 (13%) were co-habiting, 4 (9%) had lost their spouse through death, 2 (4%) were separated from spouse and 1 (2%) was divorced. This finding of the study showed that the majority of the respondents were single. (See Figure: 3 below).

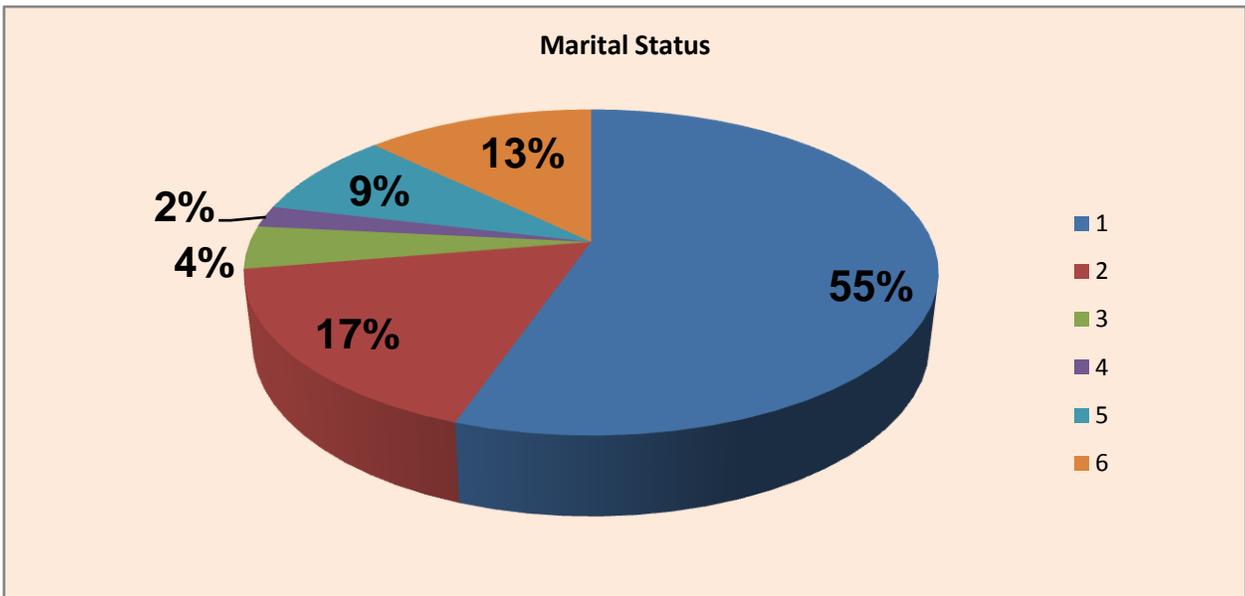


Figure 3: Distribution of respondents according to Marital Status

4.2.4 Occupation of the Respondents

Twenty-three (49%) of respondents were unemployed, while 10 (21%) were working full time and 10 (21%) were working part time. Two (4%) were on sick leave, 1 (2%) was self-employed, and another one (2%) was a student. This finding shows that the majority were unemployed. (See Figure: 4 below).



Figure 4: Distribution of respondents according to occupation

4.2 (b) Level of Education and Knowledge of Condoms

4.2.1 Educational level of respondents

The study showed that 40 (85%) of respondents have some secondary school education. Five (11%) respondents had primary school education, 2 (4%) had a Bachelor's degree or diploma. The finding of this study was that the majority of the respondents had a secondary school education. (See Figure: 5 below)

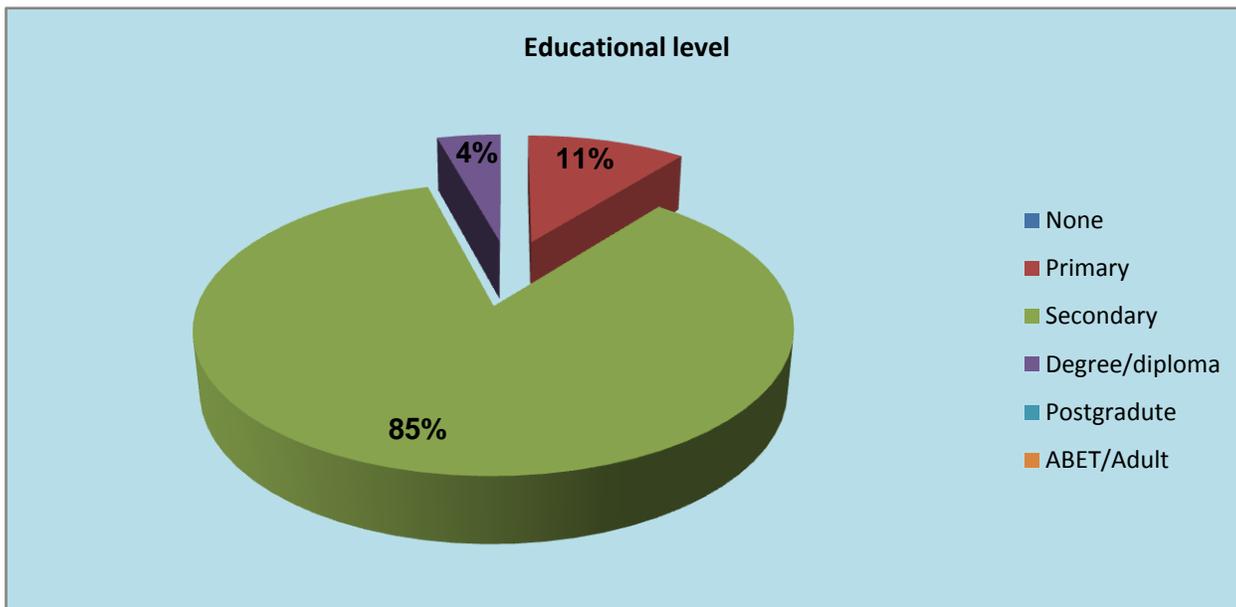


Figure 5: Distribution of respondents according to level of education attained.

4.2.2 Adherence counseling on condom use by ARV Site.

The findings of the study revealed that the majority of respondents 37 (79%) across the age brackets do receive adherence counselling on condom use during their visit to the ARV Site.”However, 9 (19%) of the respondents reported that adherence counselling was ‘sometimes’ offered them, and 1 (2%) reported that he/she had ‘never’ received it. (See Figure: 6 below).

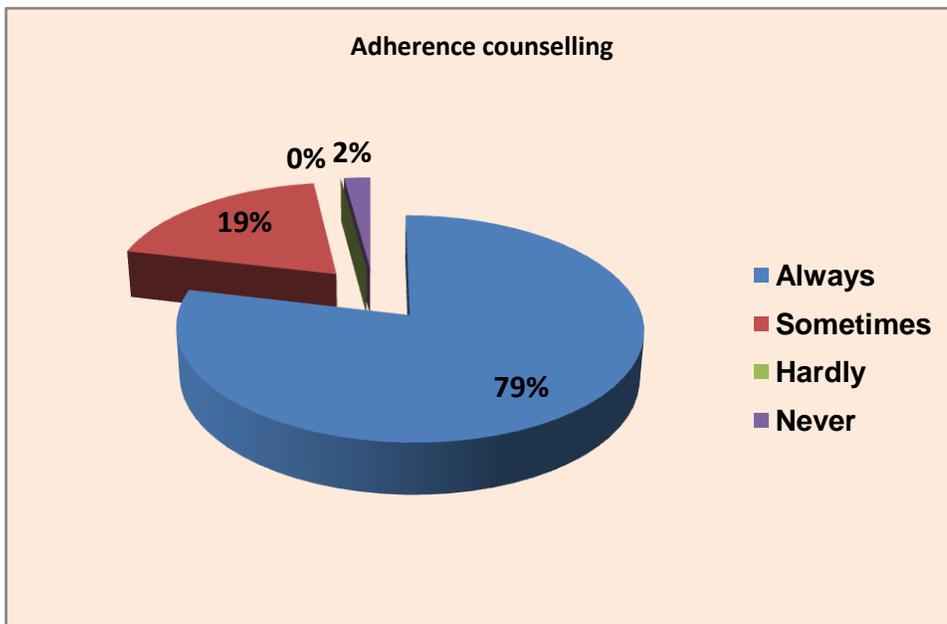


Figure 6: Distribution of respondents according to whether they receive adherence counselling on the use of condoms during visits to ARV Site.

4.2.3 Respondents’ knowledge of what condoms are used for.

The majority of respondents 41 (87%) reported that condoms are used to protect against the transmission of HIV. Two (4%) respondents reported that condoms are used to make sex more enjoyable, 1 (2%) reported that condoms are used to prevent pregnancy and the last 1(2%) reported that condoms are used for hygiene purposes. The finding of this study is that the majority of respondents reported that condoms are used to protect against the transmission of HIV. (See Figure: 7 below).

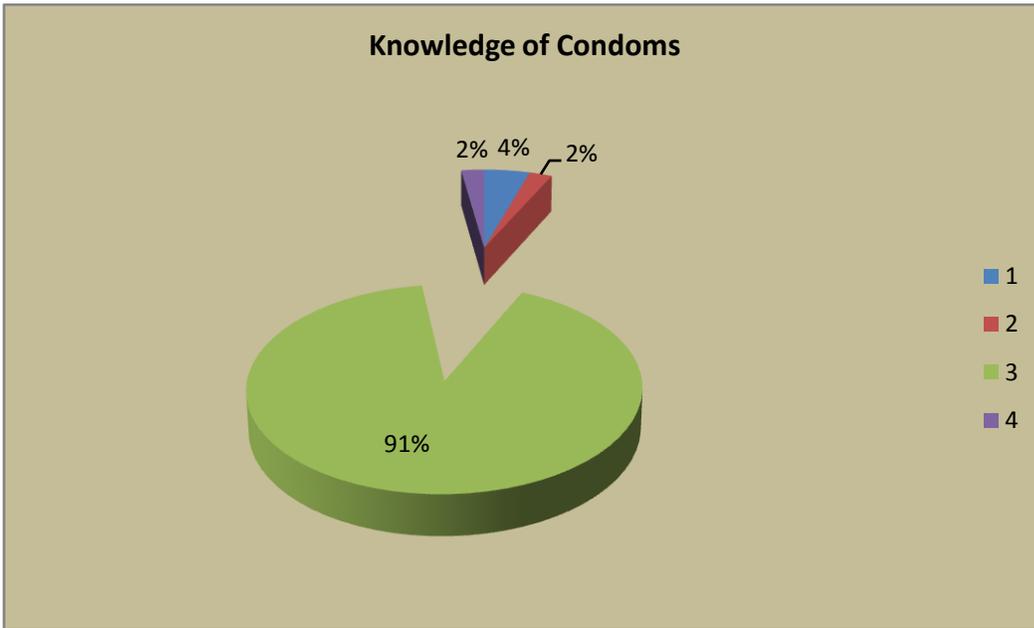


Figure 7: Distribution of respondents according to their understanding of what condoms are used for.

4.2.4 How to protect oneself against HIV re-infection.

Respondents were asked to choose appropriate answers from five options on how patients who are on ARVs and sexually active can protect themselves from re-infection. The question was answered by 36 respondents. The majority of respondents 29 (81%) reported that to prevent HIV re-infection, an ART patient must always use a condom during sexual intercourse. (See Figure: 8 below).

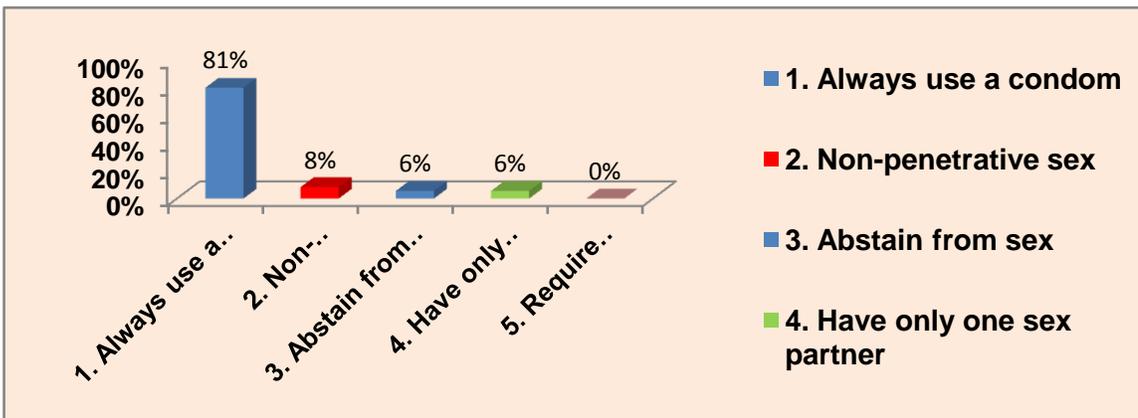


Figure 8: Distribution of respondents according to their understanding of how a sexually active patient on ART can protect himself/herself from HIV re-infection.

4.2 (c). Condom use

4.2.1 Sexual engagement by respondent since last visit to the ARV Site.

The patients on ART at Aliwal North Hospital collect their ARVs on a monthly basis. Whereas 33 (70%) of respondents reported that they had had no sexual intercourse since the last visit to the ARV Site, 14 (30%) claimed to have engaged in intercourse. The finding of this study is that the majority of patients did not engage in sexual intercourse after they had visited the ARV Site the previous month. (See Figure: 9 below).

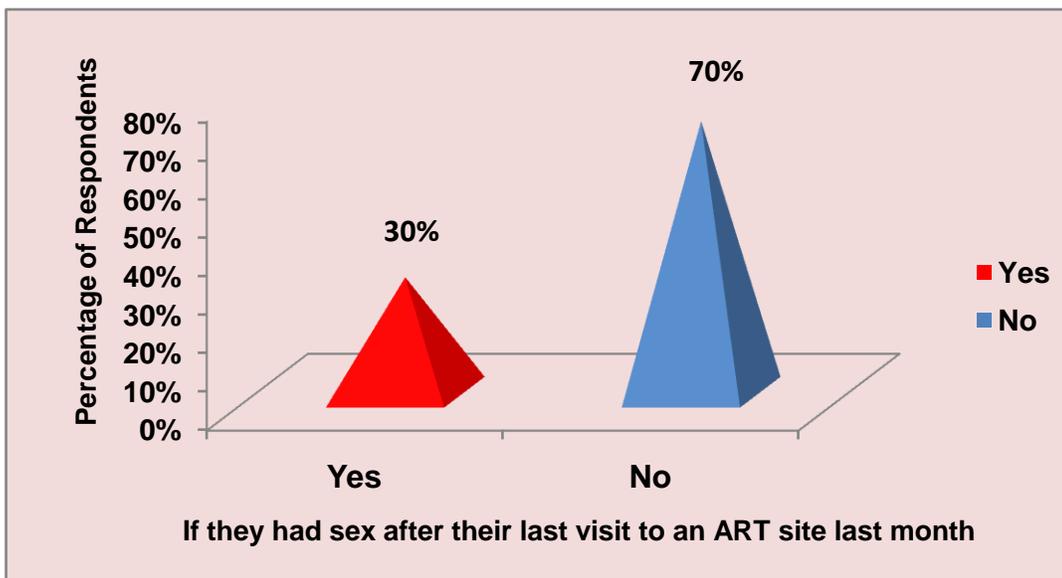


Figure 9: Distribution of respondents according to whether they had had sex after the visit to the ARV Site.

4.2.2 Knowledge of the HIV status of respondent's sexual partner.

The findings show that the majority of respondents 28 (60%) do know the HIV status of their partner/s however 19 (40%) of respondents do not know the status of their partners.

(See Figure: 10 below).

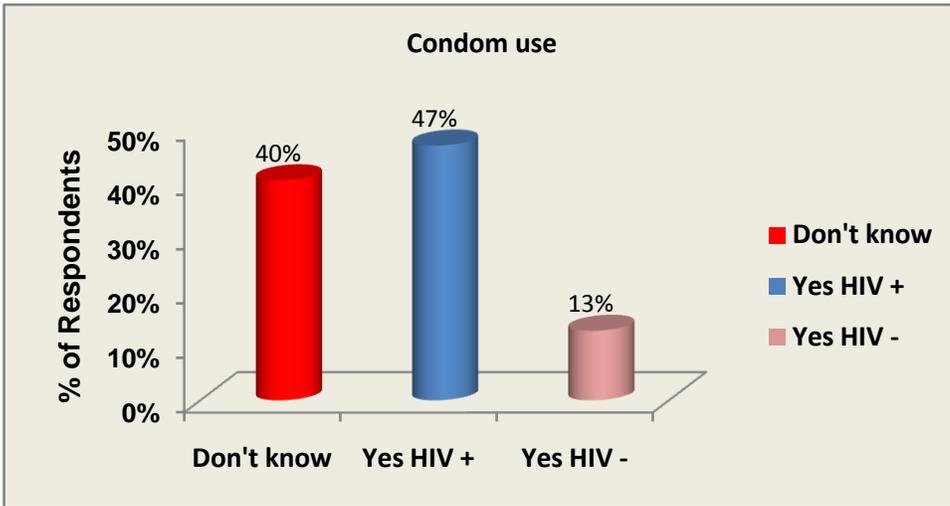


Figure 10: Distribution of respondents according to whether they know the HIV status of their partners.

4.2.3 Condom demonstration to respondent by Lay Counsellors at the ARV Site.

According to the findings of the study, the majority of respondents 43 (91%) reported that they are shown how to use a condom during their visits to the ARV Site and 4 (9%) said they have not been shown. (See Figure: 11 below).

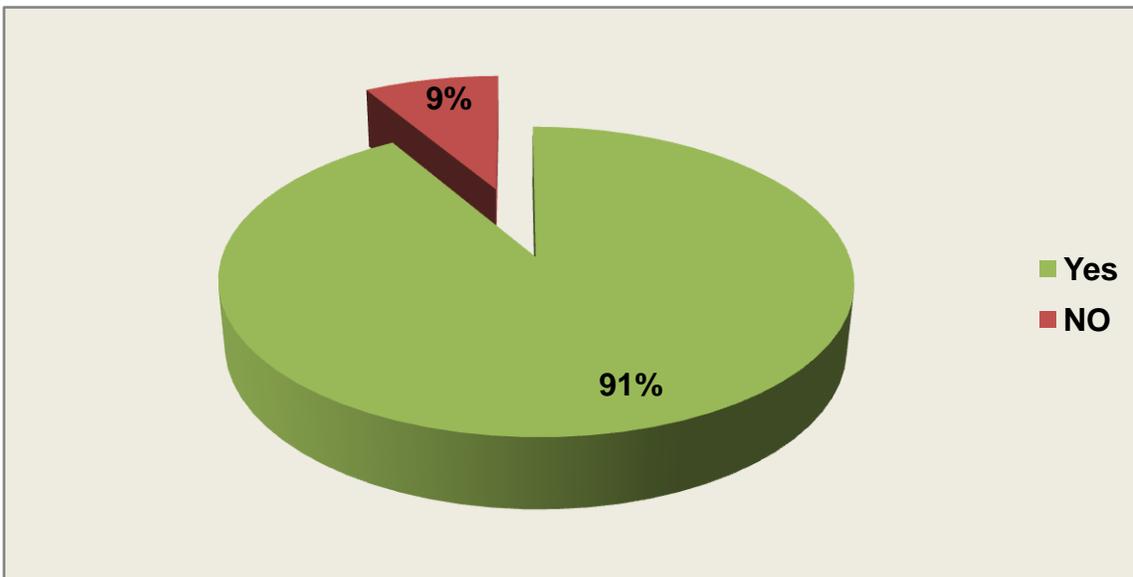


Figure 11: Respondents responses on whether they are being shown how to use a condom during their visits to the ARV Site.

4.2.4 Knowledge about when should a condom be used during sex.

For question 5.3.12, a Likert scale was used. According to Kirakowski (2004) this scale is used to measure the extent to which a person agrees or disagrees with an attitudinal question. The respondents were given a statement and had to choose an option from the five choices given on the Likert scale. The statement was ‘Condoms should be used every time, from start to finish of each sexual encounter’. Respondents were asked to choose one option from the following: Strongly Agree, Agree, Neither Agree nor Disagree, Disagree or Strongly Disagree. Twenty respondents (42%) strongly agreed with the statement, 17 (37%) agreed, 1 (2%) neither agreed nor disagreed, 6 (3%) disagreed and 6 (13%) strongly disagreed. Overall, the majority of respondents 37 (79%) strongly agreed and agreed with the given statement. (See Table: 1 below).

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
20 (42%)	17 (37%)	1 (2%)	3 (6%)	6 (13%)

Table1: Proportion of respondents’ responses to the statement: Condoms should be used every time, from start to finish of each sexual encounter.

4.2.5 The correct use of a condom during last sexual intercourse.

The respondents were asked to choose one from three options (Yes, No, Can't remember). The majority of respondents 30 (64%) reported that they had used a condom from start to finish of each sexual activity, 16 (34%) said No and 1 (2%) could not remember. (See Figure: 12 below).

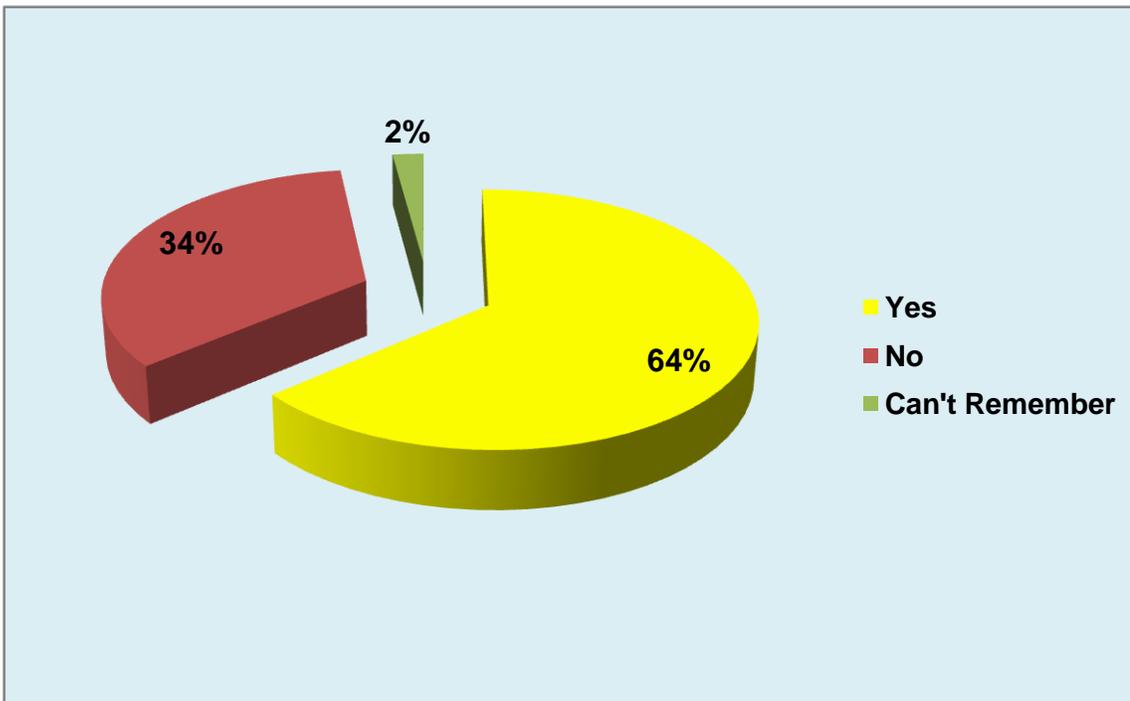


Figure12: Respondents responses to whether they had used a condom to start to finish during last sexual intercourse.

4.2.6 Supply of condoms for patients on ART

Respondents were asked if they have sufficient condoms to last until the next visit to a condom dispenser. Forty-one (87%) of respondents said Yes, and 6 (13%) said No. The majority of respondents have sufficient condoms to last until the next visit to the condom dispenser. (See Figure: 13 below).

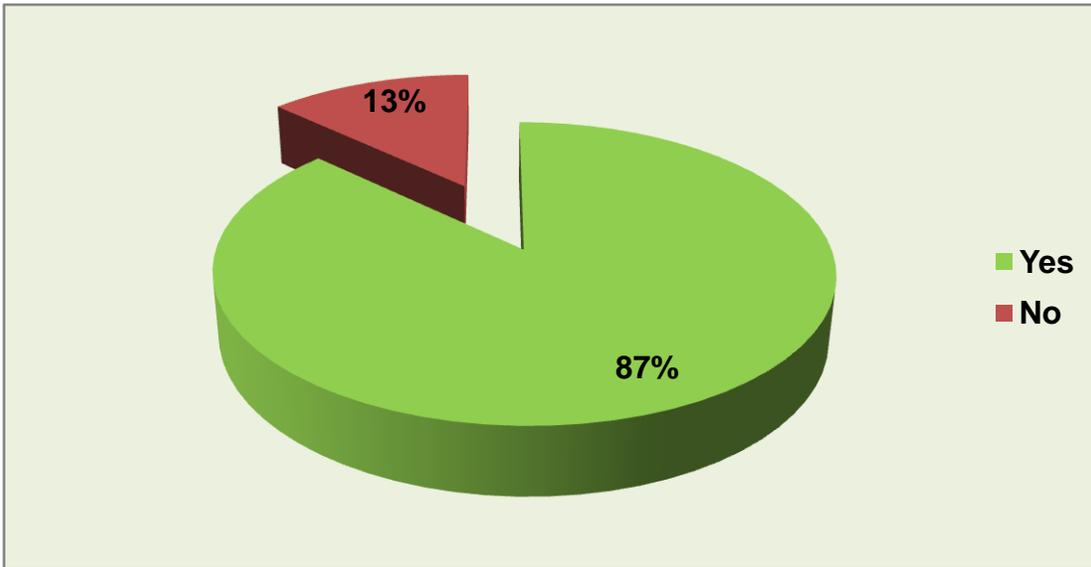


Figure 13: Respondents’ responses regarding their supply of condoms

4.2.7 The number of times respondent engages in sexual intercourse in a week.

Twenty-three (49%) of respondents reported that they engage in sex once a week, 16 (34%) engaged in sex twice a week, 4 (9%) of respondents engage in sex three times, 3 (6%) reported that they engage in sex between four-and-five times and the last group of 1 (2%) respondent reported that he engaged in sex more than six times a week. (See Figure: 14 below).

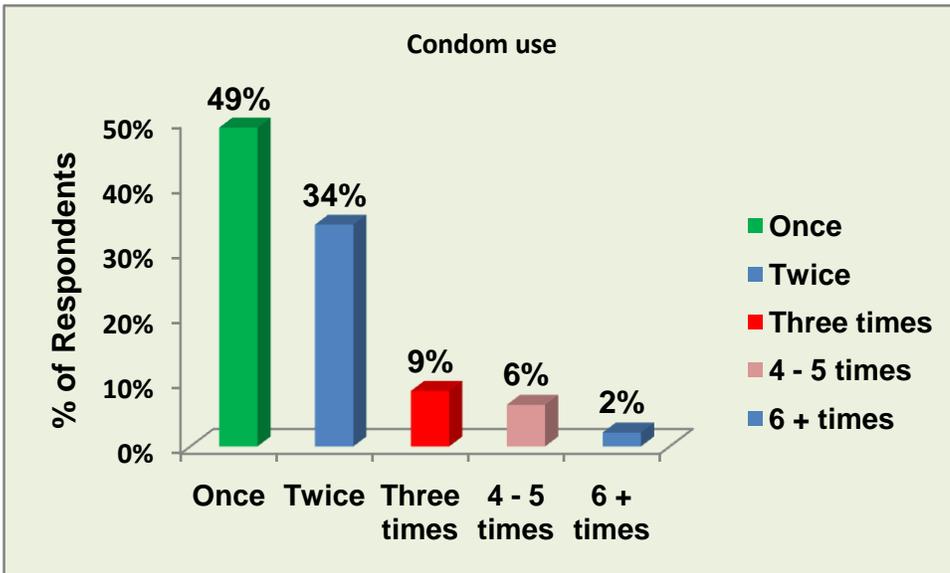


Figure14: Respondents’ responses on the frequency of their sexual engagement per week.

4.2.8 Instances wherein respondents wished to engage in sexual intercourse but had run out of condoms.

Thirty-three (70%) of respondents said ‘No’ there were no instances where they had to engage in sexual intercourse but had run out of condoms, and 14 (30%) said ‘Yes’ there were instances where they wished to engage in sexual intercourse but, had run out of condoms.

(See Figure: 15 below).

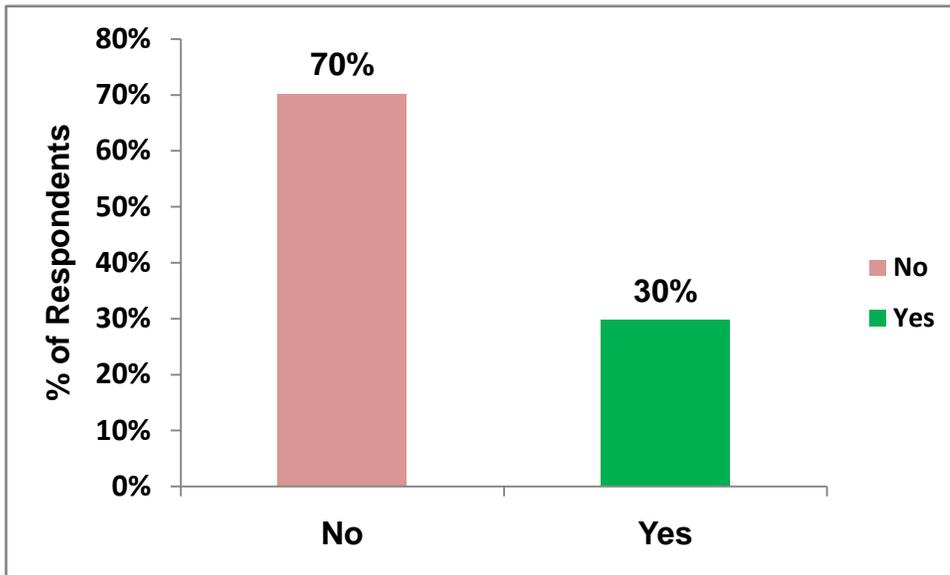


Figure 15: Respondents’ responses on whether there were instances wished to engage in sexual activity but had run out of condoms.

4.2.9 The choice of action the respondent made when he/she wanted to engage in sexual intercourse but did not have condoms.

Of the 14 respondents who reported to have run out of condoms and had wished to engage in sexual intercourse, 6 (43%) reported that they went ahead and engaged in sexual intercourse, of those, four respondents reported that ‘it was a mistake’ and two respondents said ‘they did not enjoy the sex’. The other group of respondents, 6 (43%) went to borrow from friends and 2 (4%) did not answer the question. (See Figure: 16 below).



Figure: 16. What the respondents did on the occasion they ran out of condoms but wished to engage in sexual intercourse.

4.2.10 Condom adherence by patients on ART.

Thirty-three (70%) respondents reported that they ‘always’ use condoms, 13 (28%) reported that they ‘sometimes’ use a condom and 1 (2%) respondent reported that he/she ‘never’ use a condom. The majority of respondents claimed to use a condom always and a significant proportion of respondents use condoms on an inconsistent basis. (See Figure: 17 below).

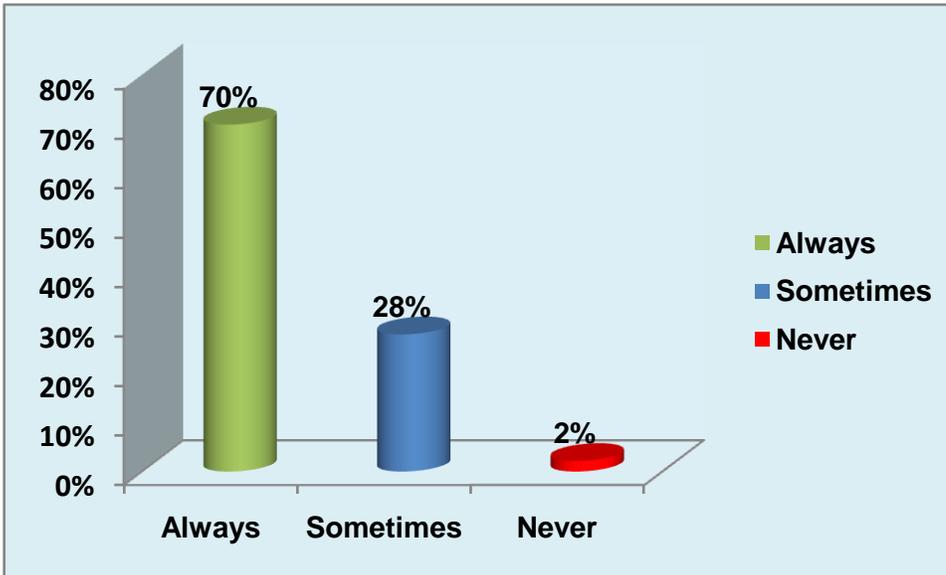


Figure 17: Respondents responses on how often they use condoms.

4.2.11 When/with whom does the respondent engage in unprotected sexual practice?

Respondents were asked when / with whom they have sex without a condom and were given three options to choose from (Regular partner, Casual once off partner, Never). Twenty-eight (60%) said ‘Never’, 17 (36%) said with ‘Regular partner’, 2 (4%) said with ‘Casual once off Partner’. The majority of respondents 28 (60%) reported an absolute adherence to condom use. (See Figure: 18 below).

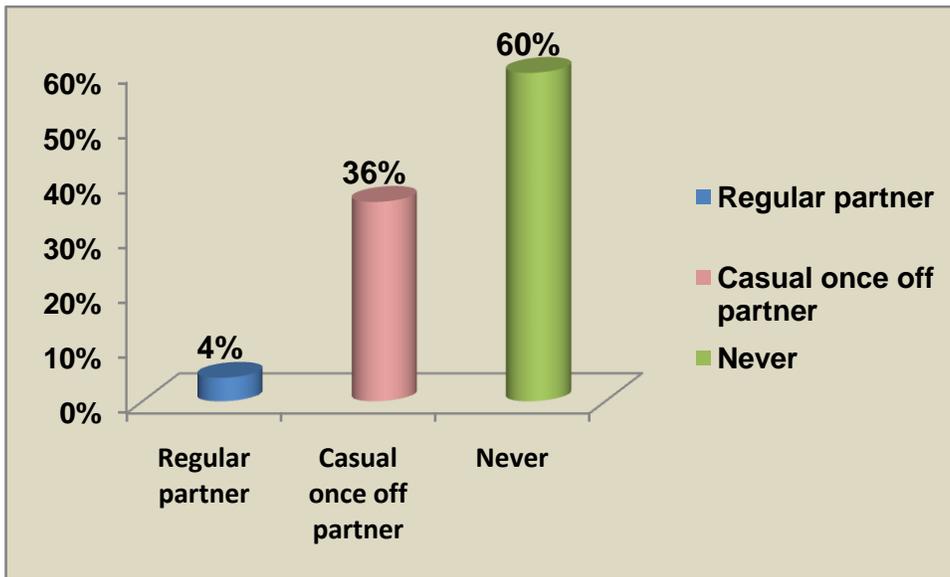


Figure 18: Distribution of respondents' responses to when / with whom they have sex without a condom.

4.2.12 Scenarios where engaging in unprotected sexual intercourse would be perceived as risky.

Respondents chose from all six options that were given, however, two respondents did not tick an answer on this question. The majority of respondents (41%) reported that they find it risky to engage in sex with a sex worker without a condom. What were interesting though were the 7 (16%) respondents that ticked on option 6, which denotes, 'none of the above'. (See Figure: 19 below).

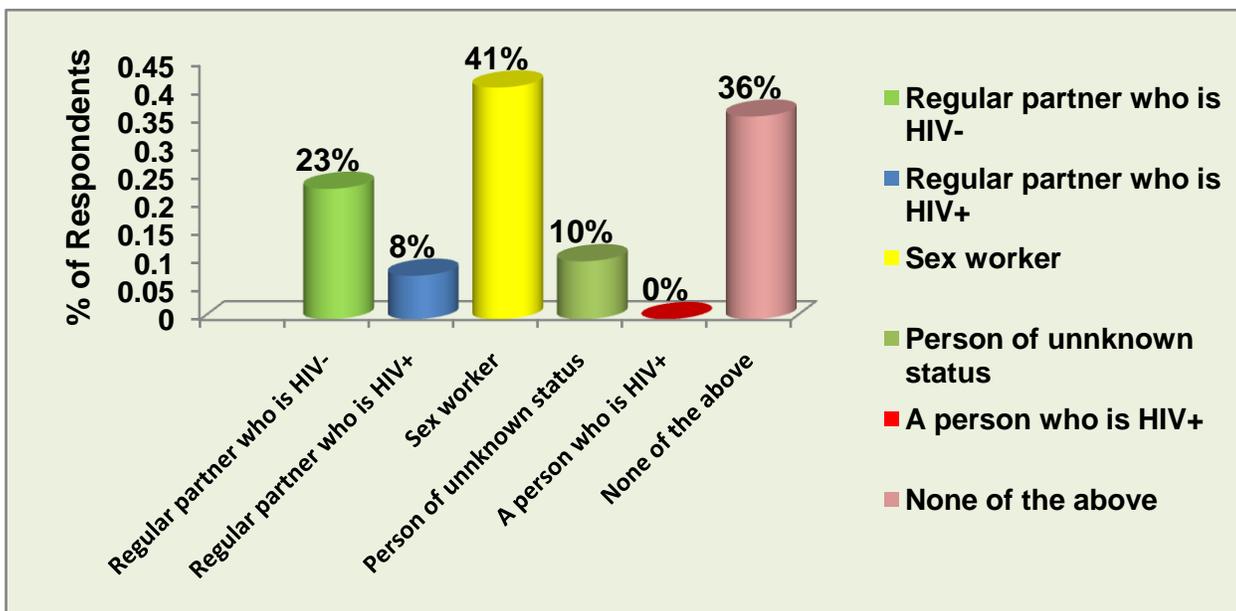


Figure 19: Respondents' responses to scenarios to where engaging in sex without a condom would be risky.

4.2.13 Circumstances under which they would engage in unprotected sex.

Respondents were given four options to choose from. The majority of respondents reported that under certain circumstances they can engage in sexual intercourse with their regular partner without a condom. It must be mentioned that 10 respondents did not select an answer from the given options, nevertheless, 25 (67%) of respondents to this question reported that they could engage in sex with their partner without a condom regardless of HIV status.

(See Table: 2 below).

OPTIONS	With your partner regardless of HIV status.	With the person you have been fantasizing about.	When having sex with a person for the first time.	With a virgin.
Number of responses	25	4	3	5

Table 2: Distribution of respondents' responses to questions regarding the circumstances under which they would engage in sex without a condom.

4.2.14 Circumstances wherein respondents' would refuse to engage in unprotected sex.

The majority of respondents 16 (47%) reported that they would refuse to engage in sexual intercourse with a sex worker if a condom was not available. Twenty-six percent reported that they would refuse to engage in sexual intercourse with their regular partner who is HIV negative if a condom was not available. It must be reported that of the 47 participants who participated, 14 did not answer the question. (See Figure: 20 below).

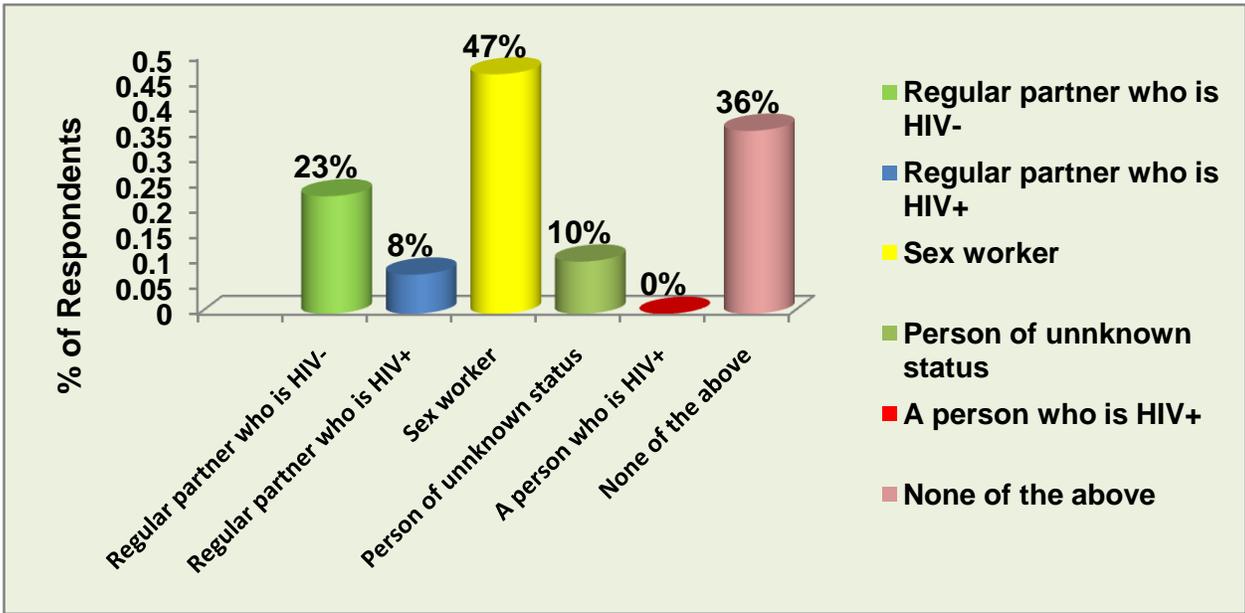


Figure 20: Distribution of respondents' responses to scenarios in which they would refuse to have sexual intercourse without a condom.

4.2.15 Adherence to condom use in the last two months.

The majority of respondents 38 (81%) reported that they had not engaged in sex without a condom in the last two months, and 9 (19%) reported that they had engaged in unprotected sex in the last two months. The finding of this study is that the majority of respondents had practised safe sexual behaviour in the past two months. (See Figure: 21 below).

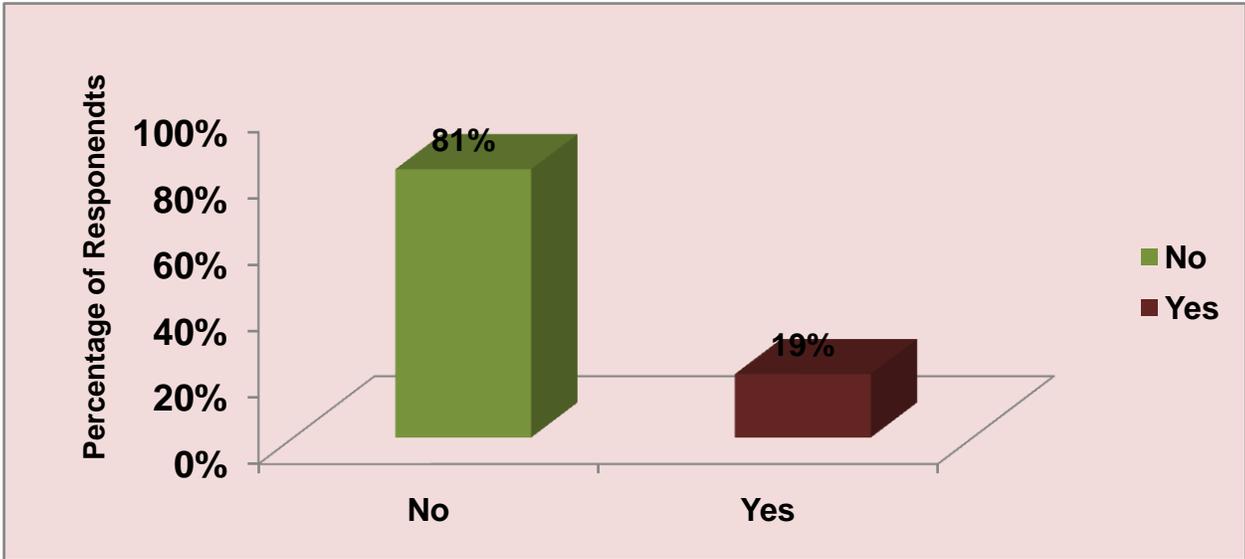


Figure 21: Distribution of respondents' responses to whether they had engaged in sex without condoms in the last two months.

4.2.16 Number of times that respondent had engaged in unprotected sexual intercourse in the past two months.

Twenty-two participants reported that in the past two months they had not engaged in sexual intercourse without a condom, which meant that only 25 participants made a selection from the given options. Of that twenty-five, 12 (48%) reported to having been engaged in sexual intercourse once over that two month period, 9 (36%) had engaged in sex twice, 3 (12%) had engaged in sex three times and 1 (2%) respondent had engaged in sex more than six times. (See Figure: 22 below)

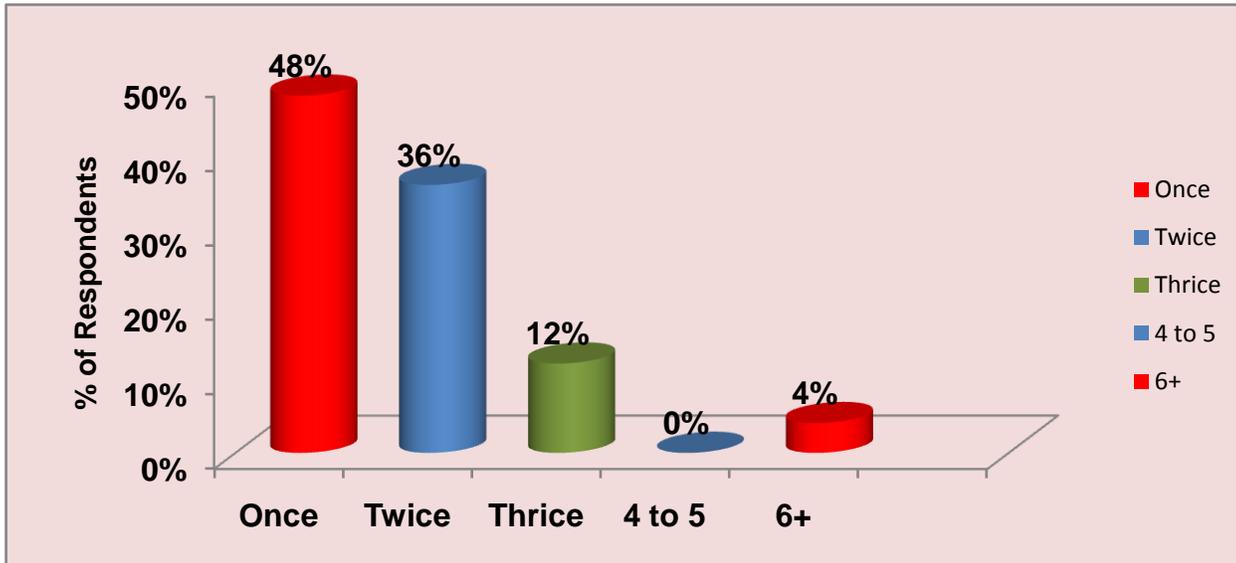


Figure 22: Distribution of respondents' responses regarding the number of times they had sexual intercourse without condoms in the last two months.

4.2 (d) Factors associated with non use of condoms.

4.2.1 Factors that make it hard to use condoms during sexual intercourse.

The majority of respondents 20 (43%) reported that being drunk with alcohol makes it difficult to use condoms during sexual intercourse, 11 (23%) reported that it may be perceived as a sign of lack of trust in one's partner, 8 (17%) claimed it can be difficult to use condoms for fear of rejection and violence and 6 (13%) claimed that it spoils the pleasure and 2 (4%) reported that using condoms during sexual activity is difficult because of religious beliefs.(See Figure: 23 below).

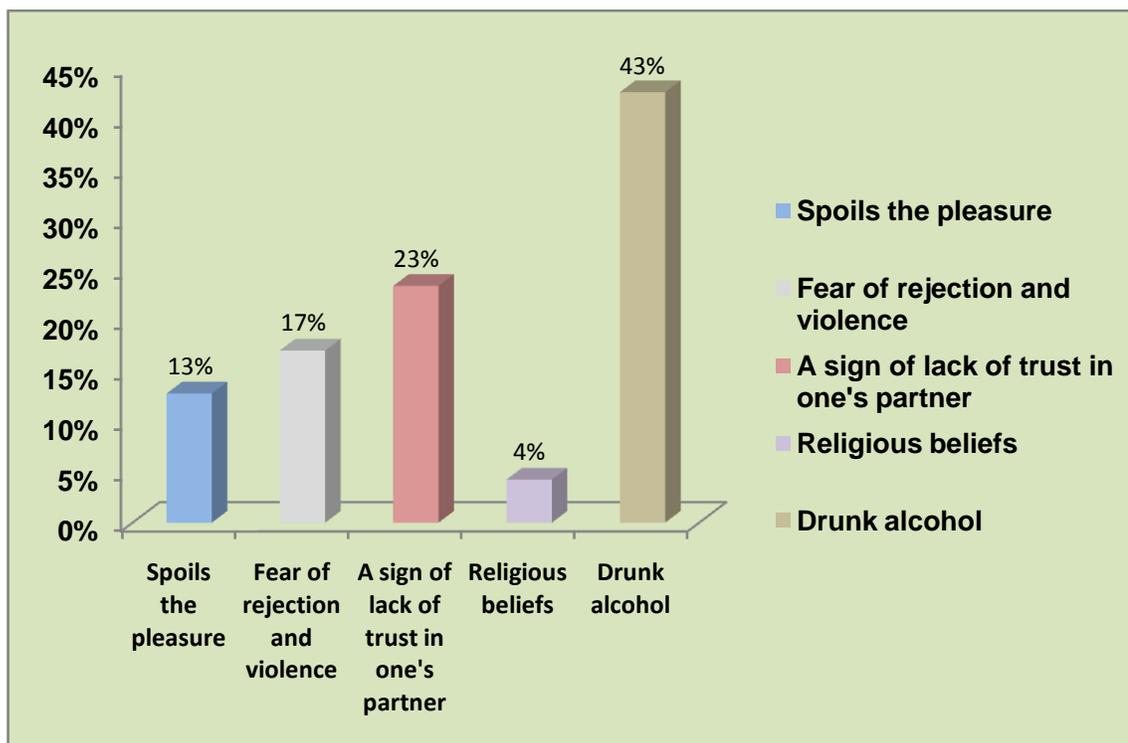


Figure 23: Distribution of respondents' responses regarding matters which make it hard to use condoms during sexual intercourse.

4.2.2 Why should a person who is on ART use a condom during sexual intercourse?

The respondents' replies to the question reflected four themes and were thus grouped into four categories. The majority of respondents 29 (62%) reported that condoms are used as a prevention method to protect the partner/s against HIV re-infection. Ten (21%) of respondents reckoned that condoms should be used so that the patient may not get sick and to keep the CD4 cell count high, the other group thought that an ART patient should use a condom to protect against sexually transmitted infections. Then 5 (11%) of the participants in the research study did not offer an answer to the given question. (See Table: 3 below).

Themes	Protect against HIV re-infection	Protect against STIs	Not to get sick & to keep CD4 level high	No answer was given.	Total
No of responses per theme	29 (62%)	3 (6%)	10 (21%)	5 (11%)	47

Table 3: Thematic distribution of respondent' responses on why ART patients should use condoms during sexual intercourse.

4.2 (e) Perceptions towards condom use.

4.2.1 Condom safety and effectiveness as a tool for prevention of HIV transmission.

Forty (85%) of respondents thought that condoms are really safe and effective in the prevention of HIV infection, 5 (11%) said they were not sure and 2 (4%) said, no they did not think that condoms were really safe and effective in the prevention of HIV infection. The majority (85%) thought that condoms were a safe and effective way to prevent the transmission of HIV in human beings. (See Figure: 24 below).

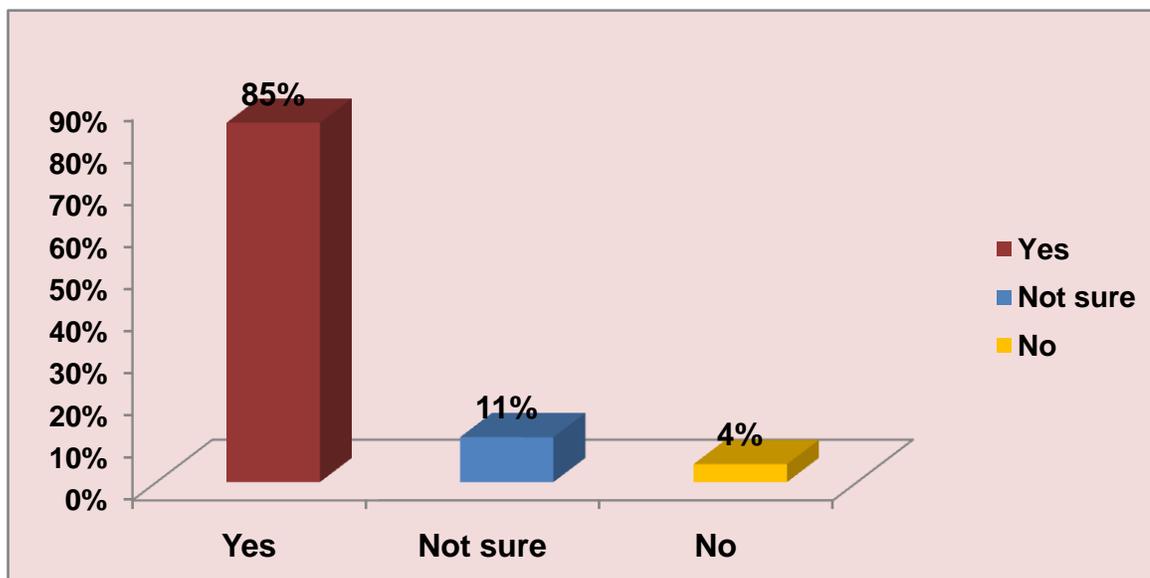


Figure 24: Distribution of respondents' responses in relation to whether they think condoms are really safe and effective in the prevention of HIV infection.

4.2.2 Is it still necessary to use a condom even if both sexual partners are HIV positive?

According to the results of the questionnaire, 43 (91%) of respondents reported that condoms are still necessary even if both sexual partners are infected with HIV.

Four (9%) of respondents said 'no' it is not necessary to use condoms if both sexual partners are infected by HIV. (See Figure: 25 below).

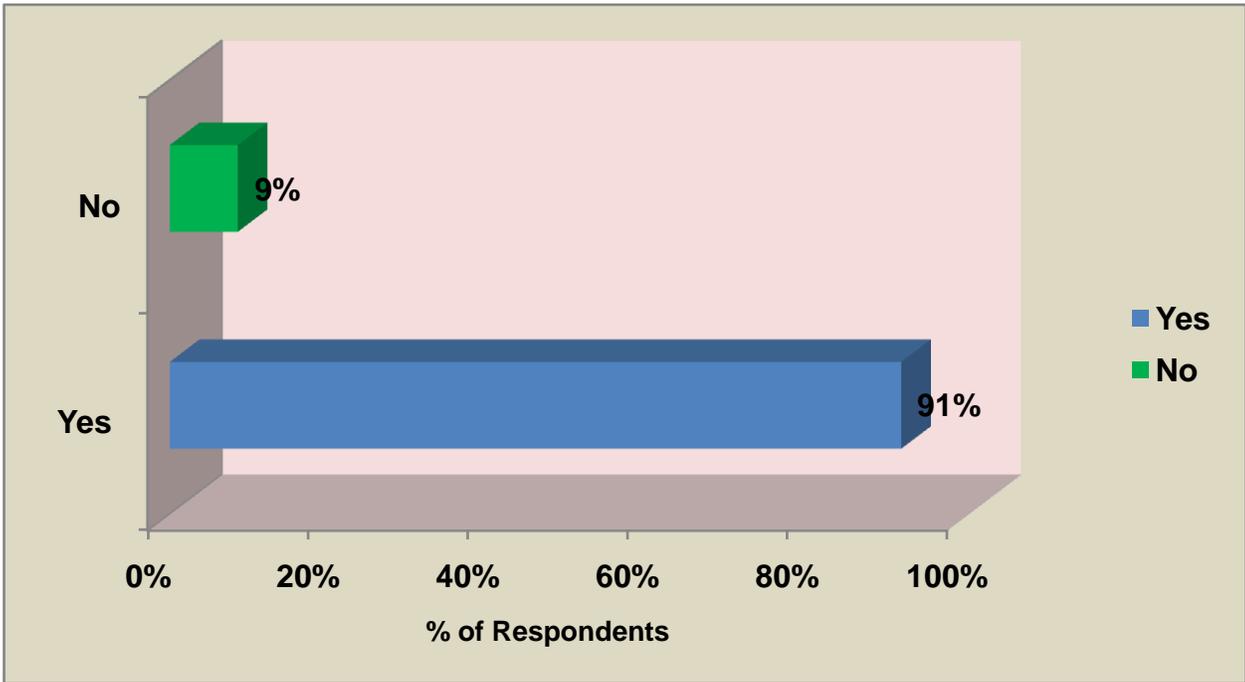


Figure 25: Distribution of respondents’ responses on whether it is still necessary to use a condom even if both sexual partners are HIV positive.

4.2.3 Respondent’s views to a question on whether an HIV-positive person should always use a condom during sexual intercourse.

The majority of respondents 45 (96%) thought that ‘Yes’ a person who is HIV positive should always use a condom during sexual intercourse. One (2%) respondent said ‘No’ a HIV –positive person should not always use a condom during sexual intercourse and another 1 (2%) said he/she ‘Don’t Know’. (See Figure: 26 below).

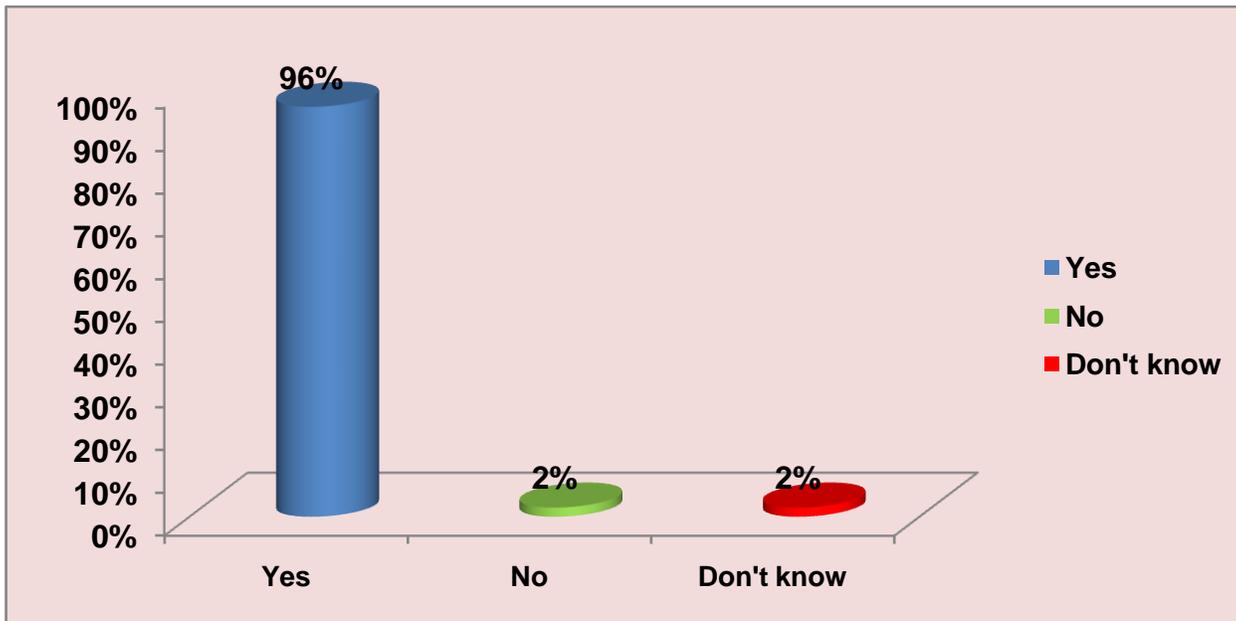


Figure 26: Distribution of respondents' responses on whether they thought an HIV positive person should always use a condom during sexual intercourse.

4.2.4 Respondent's view on whether a person who is HIV-positive should not always use a condom during sexual intercourse.

In the research study only one respondent had reported a 'No', but no reasons were advanced to motivate that view.

4.2.5 Respondent's view to a question on how a person who is on antiretroviral therapy can practise safe sex.

Forty-four (94%) of respondents said 'by always using a condom', the last three respondents advanced different reasons, one of which did not make sense. (See Figure: 27 below).

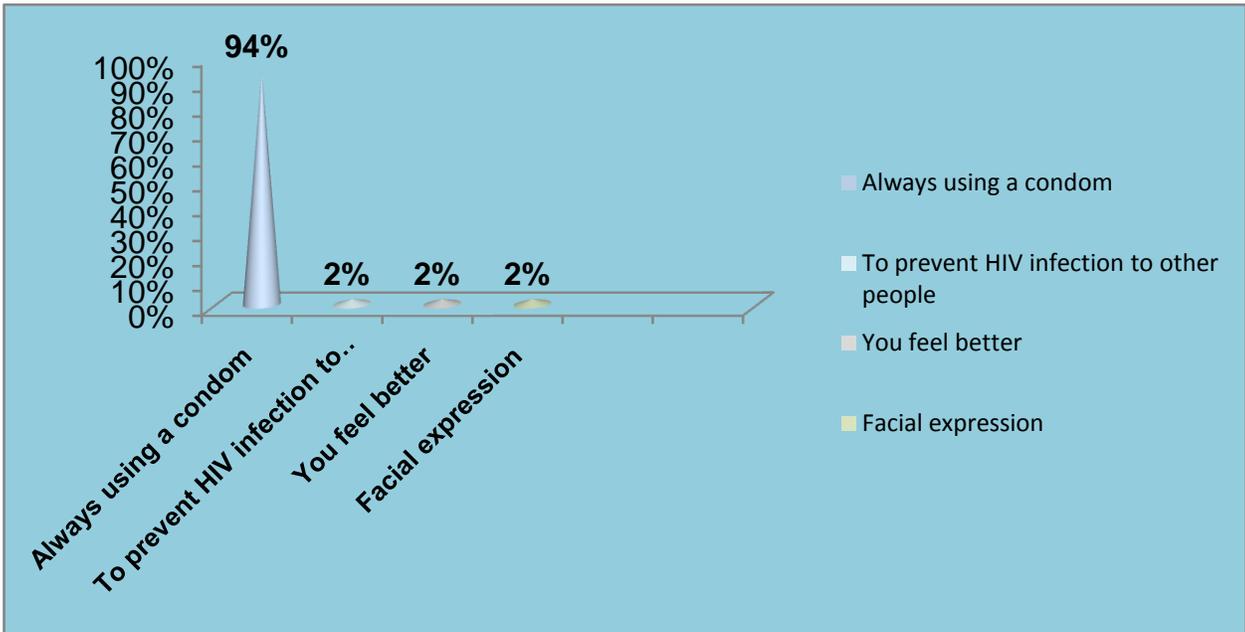


Figure 27: Distribution of respondents’ responses regarding how a person who is on antiretroviral therapy should practise safe sex?

4.2.6 Reasons for not using a condom at last sexual activity with regular partner.

Respondents were given eleven options to choose from, 21 participants did not choose any of the options but rather wrote in their questionnaire forms that they don’t practise sex if a condom is not being used. Therefore, only 26 respondents replied to this question, of those 12 (46%) chose option number six which said ‘did not have condoms at hand’. The majority of respondents reported that at the time they wished to engage in sexual intercourse, there were no condoms with them or at that site. (See Figure: 28 below).

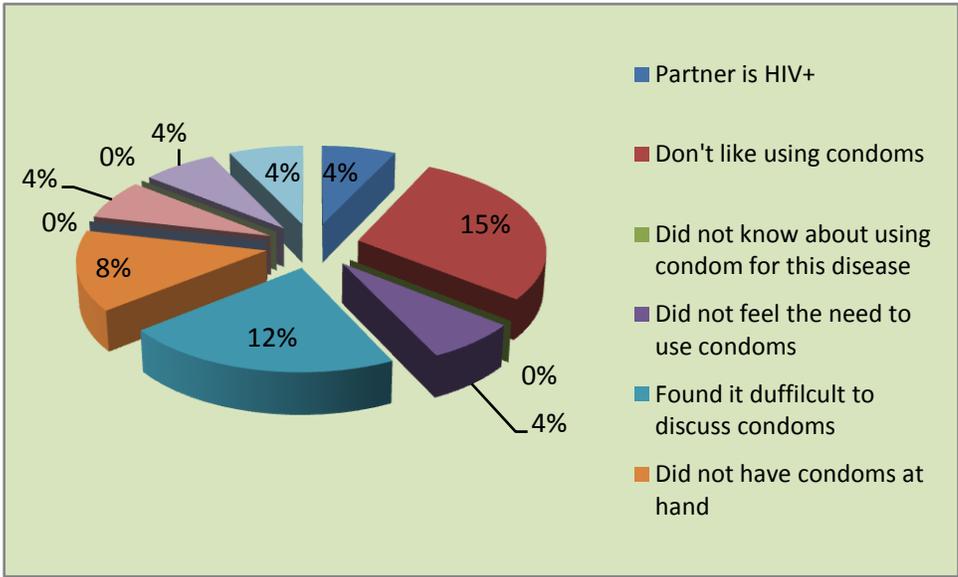


Figure 28: Distribution: respondents' responses on the reasons for not using a condom at last sex with regular partner.

Section Two

4.3 Discussion

4.3.1 Socio-Demographic and Socio- Economic Information

The findings of the survey showed that the age of respondents ranged from 18 to 60 and above with a peak at age group between 31-40 years. Most of the respondents were within the reproductive age group of 21-50 (Figure 2). This finding confirmed the results of a survey study conducted by the HSRC (2008) which established that there were sustained high levels of infection among females in the 30-34-year-old age group.

Aliwal North Hospital is situated in the area served by the Maletswai Local Municipality, the municipality is part of the greater Ukhahlamba District Municipality. The catchment population of Maletswai Local Municipality is 37 314 and more than half of the population is below 20 years old, women account for 53% of the total population (www.sdims.ecprov.gov.za). A community survey conducted by Statistics South Africa in 2007 recorded high levels of poverty in the Eastern Cape and 74% of the people live below the poverty line of R800 or less a month). The unemployment rate in the Ukhahlamba District Municipality is very high, as a result the district has the highest rate of migration in the province. 7% of the district population overall is reported as migrating from their household, and this is so for 5.6% of the provincial population (www.socdev.ecprov.gov.za). In the same website, it has been reported that 76% of people in the district are classified as 'person in poverty'. This may explain why a lot of people are accessing social grants from the government.

The findings of the study showed that the majority of patients who are on antiretroviral therapy at Aliwal North Hospital are in the prime reproductive ages of 21-50 years.

4.3.2 Level of Education and Knowledge of Condoms

The finding of this study is that all respondents have been to school and the majority (85%) has a secondary school education (Figure 5). Furthermore it has been noted that only two respondents attained a tertiary qualification in the form of a degree or diploma.

Some studies in South Africa have found that condom use is highly correlated with social and demographic characteristics such as age, education and race (Marroni et al, 2003). Research to-date shows a positive relationship between education and HIV related knowledge (Gregson et al., 1998). Whether this knowledge actually translates into protective behaviour is, however, unclear (Akwaru et al., 2003). Nevertheless, education, by virtue of the cognitive skills it imparts, can also have an impact on health seeking behaviour and exposure to health interventions (Kilian et al, 1999), as well as interpersonal communication.

On questions aimed at assessing knowledge of condoms, the majority of respondents (94%) reported that in the context of HIV/AIDS condoms are used to protect against the transmission of HIV (Figure 7). However, in the light of the fact that the South African Government has invested a lot of financial resources in promoting HIV prevention messages through the media and at health care facilities, the expectation is that every person who is on antiretroviral therapy should know why condoms are used. The fact that there was a tiny group of respondents that did not answer that fundamental question is an area of concern. It would therefore appear that the facility should focus on adherence counselling on condom use.

Overall, there was a high level of knowledge about condoms among the respondents.

4.3.3 Condom use.

There is a concern that HIV-positive people on ARVs may view treatment as a substitute for condom use and engage in risky sexual practices, in addition, it was found during the study that people on ARVs experienced an increase in sexual activity (www.PlusNews, 20 Jul 2010). There is a saying that ARVs bring back the sex life of patients, and in the research study almost half of respondents (49%) reported that they engage in sex once a week (Figure 14). Ninety-one percent of respondents reported that every time they visited the ARV site where they collect their treatment, they are shown how to use a condom (Figure 21). This is very important, because studies have reported that there are people who do not know how to use a condom correctly. Eighty-seven percent of respondents reported that they have a sufficient supply of condoms to last them until their next visit to the condom dispenser (Figure 13). Even though the availability of condoms is important, it is equally important to realize that availability does not equate to use.

Seventy-nine percent of respondents agreed that condoms should be used from start to finish of each sexual intercourse (Figure 12), and when asked if there was an instance where the respondent had to or wished to engage in sex but had run out of condoms, 70% of respondents said that had never happened, 30% said it had happened. (Figure 16).

The respondents were then asked how they responded under those circumstances, 48% of them said they went to borrow from friends, the other 48% said they went ahead and engaged in unprotected sex, some said 'it was a mistake' others said 'we did not enjoy it', and 4% of respondents did not respond.

When respondents were asked how often they use condoms, 70% of them reported that they always use them, 28% said they sometimes use them and 2% said they never use them (Figure 18). However, when respondents were asked when or with whom do they have sex without a condom, 60% said never (implying that there is never an instance when they do not use condoms), 36% said with a casual once off partners and 4% said with regular partners. The fact that 36% of respondents engaging in sex with a once off partner without a condom is very worrying as one of the social determinants of HIV transmission is multiple sexual partners, The percentage of those who said they had never engaged in sex without a condom (60%) is somewhat lower than those who said they always use a condom (70%) (Figure 16 & 17). However, the same percentage is equal to the percentage of respondents who reported that they had never run out of condoms.

When respondents were asked if they had had sex without a condom in the last two months, 81% said no (Figure 22).

Whereas, 60% of respondents reported knowing the HIV status of their sexual partners, 40% did not know the status of their partners (Figure 10).

Even though the use of condoms has been a major goal of the South African National Department of Health, , condom use involves two people who come to an agreement to use a condom, therefore, for those respondents who did not know the HIV status of their partners, it may be difficult to use condoms during every sexual intercourse. In addition, there is an increasing appreciation that behaviour and choices are shaped by not only what individuals know, but also by larger contextual factors that may limit or promote levels of personal control (Caldwell et al., 1999). A key finding of this study is that the majority of patients (70%) on antiretroviral therapy reported always using condoms during sex (Figure 17).

This result is consistent with the results of the survey by LoveLife (2008) and other studies Mola 2006; Bateganya. et al, (2005); Bunnell et al, (2005); LoveLife (2008) which reported that condom use by ART patients had increased to above 50% during last sexual intercourse. Nevertheless, a concerted effort should be made to reduce the percentage of those who are non-adherent to condom use (Figure 17).

4.3.4 Factors associated with non use of condoms

Sexual behavior varies; it is, by its very nature, a product of interaction between two individuals and not the result of individual action and decisions only (Ingham and van Zessen, 1997). The same individuals may interact differently with another set of partners, producing a separate set of behaviours. The interaction between a particular couple is influenced by characteristics of the individual partners, who, in turn are located in a wider social milieu.

Whereas the majority (41%) of respondents reported that being drunk with alcohol makes it hard to use condoms during sexual intercourse, 23% highlighted that the use of condom during sex may be perceived as a lack of trust in one's partner (Figure 23). Studies have shown a correlation between alcohol use by patients on antiretroviral therapy and risky sexual behavior. The fact that the majority of respondents have identified alcohol use as a causal factor for not using condoms during sex, confirms the results of research studies on the subject. Gender norms shape the lives of males and females to the extent that sex has become an unequal terrain.

By and large, when it comes to deciding whether to engage in sex or not, women are often always dictated to by their sexual partners. Therefore most women find it difficult to negotiate sex with their partners, and are thus exposed to risky sexual practices.

The fact that 17% of respondents reported that condom use is associated with fear of rejection and violence is an area of concern (Figure 23). It may be argued that violence against women continues to pose a large risk for managing the spread of HIV/AIDS as well as management of those women that are HIV positive.

Other factors that have been found in research studies to be associated with non use of condoms by patients on antiretroviral therapy relate to the practice of age mixing particularly younger females having sex with older males (Katz & Low-Beer 2008) and concurrent sexual partners (Parker et al, 2007).

Understanding the factors that are associated with non use of condom could inform interventions that are aimed at encouraging protective behaviour to reduce the dual risks of HIV re-infection among patients on antiretroviral therapy.

When reporting on the factors associated with non use of condoms during sex, whereas the majority of respondents (91%) reported that patients who are on ART should use condoms during sexual activity to protect against HIV transmission or re-infection and to prevent STIs and pregnancy, however, the majority highlighted that being drunk with alcohol makes it hard to be compliant.

4.3.5 Perception towards condom use.

When respondents were asked whether they thought it was necessary to use a condom even if both partners are HIV positive, 91% agreed that they should be used (Figure 25). In addition, 85% of respondents perceived condoms as safe and effective. Respondents were able to explain how a person who is on antiretroviral therapy practice safe sex, 94% of them said to practice safe sex means using a condom always (Figure 27).

The finding of the study was that condoms were perceived in good light by the majority of patients who are on antiretroviral therapy at Aliwal North hospital.

Nevertheless, perception alone is not enough to change sexual behavior, hence the Provincial Department of Health should continue crafting programs that reinforce and promote public confidence in condoms' effectiveness.

Chapter 5: Summary, Conclusion and Recommendations

5.1 Overview of summary, conclusions and recommendations

In this chapter the findings of the research and the implications thereof are outlined, conclusions based on the research findings are drawn and recommendations and suggestions for further research are made.

5.2. Summary

This researcher set out to establish the extent to which condoms are utilised by ART patients at Aliwal North Hospital as an HIV Prevention tool. It was demonstrated that the research questions had been answered and objectives had been met. The findings of the study showed that 70% of patients on ART are using condoms and are aware of the importance thereof in preventing HIV re-infection (Figure 16 & 17). More than 80% of respondents are convinced that condoms are necessary and effective in the prevention of transmission of HIV from one partner to the other (Figure 24 & 25). However, some patients lack economic power to negotiate the use of condoms with their regular partners, as a result, replied that they find it difficult to discuss the use of condoms owing to fear of violence and aggression.

Ongoing counselling on the importance of using condoms correctly and consistently should be intensified. Another strategy would be to encourage 'couple testing' so that both partners should know their status, such an approach has a snowball effect. It will facilitate disclosure and might even result in less resistance to using condoms during sexual intercourse.

5.3. Conclusion

- a) The majority of patients on antiretroviral therapy always use condoms during sexual intercourse.
- b) Respondents are convinced of the safety and effectiveness of condoms as a prevention tool against HIV re-infection.
- c) Respondents raised the fact that being drunk with alcohol interferes with the ability to be adherent to condom use during sexual intercourse.
- d) There is a positive perception to condom use by patients on antiretroviral therapy.

5.4. Recommendations

Based on the findings of the study, the following recommendations are proposed:

- i) Consistent condom use is effective in the prevention of HIV re-infection. Condom use has increased substantially among patients who are on antiretroviral therapy at Aliwal North Hospital, however, inconsistency is the biggest challenge. The same message must therefore be brought to those patients who use condoms inconsistently. In addition, ART patients must be encouraged to keep condoms handy so that there can be no instance where they want to engage in sex but do not have condoms on hand.
- ii) Health education campaigns against stigma should be intensified and family and community support for people living with HIV and AIDS should be promoted. .
- iii) There is also a need to address the complex societal issues like unemployment, alcohol abuse and gender violence.
- iv) There is also a need to devise programmes that will encourage partners of HIV-positive patients who have not been tested to come forward and be tested.
- v) Lastly, education of HIV-positive patients to understand the concept of HIV re-infection should be intensified.

5.5. Suggestion for Further Research

- i) There is need for a further study to determine factors associated with non use of condoms by patients who are on antiretroviral therapy.
- ii) There is a need to conduct the same research study using a bigger sample to validate the results.

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APPENDIX I

QUANTITATIVE DATA COLLECTION TOOL (STRUCTURED

QUESTIONNAIRE, (twenty closed- ended and four open-ended)

**A SURVEY QUESTIONNAIRE TO INVESTIGATE THE EXTENT OF UTILIZATION OF
CONDOMS BY PATIENTS WHO ARE ON ANTIRETROVIRAL THERAPY AT ALIWAL NORTH
HOSPITAL**

DEVELOPED BY: SANDLANA S.D

YEAR: 2010

DEAR PARTICIPANTS

PLEASE NOTE THE FOLLOWING:

- You are requested not write your name in the form. Your anonymity and confidentiality are guaranteed.
- Please answer all questions as honest as possible
- This survey is based on assessing the extent of the utilization of condoms as a prevention method against HIV re-infection by patients who are on antiretroviral therapy at Aliwal North hospital.
- Please make sure after completion, the questionnaire is submitted.
- The findings of this research are significant and may be used as a guide by the Department of Health to design prevention methods against HIV re-infection

(A) Basic Information

1. Date of interview. _____
2. Study site. _____
3. Code of the interview

(B) Socio-Demographic Information

4. Sex/ Gender of participant (1) Male [] (2) Female []
5. Age in years:

18-20	21-30	31-40	41-50	51-60	61+

6. What is your current marital status?

- 1). Single (not married and not living with a partner) []
- 2) Married (monogamous/polygamous) []
- 3). Separated (currently not living together but not divorced) []
- 4) Divorced []
- 5) Widowed/ widower []
- 6) Co-habiting (not married but lives with a partner) []

(C) Socio-Economic Information

In this section, please tick the appropriate response

7. What is/was your main occupation in the last month?

- 1) Student []
- 2) Employed full time []
- 3) Employed part time []
- 4) Business/self employed. []
- 5) Sick leave []
- 8) Unemployed []
- 9) Others (specify).....

(D) Level of Education and Knowledge on ARV drugs

In this section, please tick the appropriate response

8. What is your level of education?

None	Primary education	Secondary education	Degree/ diploma	Postgraduate	ABET/ Adult education

9. During your visits to the ARV Site do you receive adherence counseling on condom use?

1. Always	2. Sometimes	3. Hardly	4. Never

10. In your own view for what use are condoms?

To make sex more enjoyable	Hygiene purposes	Protect against the transmission of HIV	Prevent pregnancy

11. How can people who are HIV positive protect themselves from getting infected again with HIV?

Please circle the appropriate response/s. You can choose more than one answer.

- 1) Abstain from sex
- 2) Non-penetrative sex/thigh
- 3) Always use a condom
- 4) Have only one sex partner
- 5) Require partner to take blood test

(E) Condom Use

In this section, please tick the appropriate response

12. Have you had sexual intercourse (vaginal) with any partner since your last visit to the ARV Site?

1. Yes	2. No

13. For each of your partners, do you know if she/he has HIV infection?

1. No, I don't know	2. Yes, HIV positive	3. Yes, HIV negative

14. Have you been shown how to use a condom during your visits to the ARV Site?

1. Yes	2. No

15. Condoms should be used every time, from start to finish of each sexual encounter?

Strongly disagree	Disagree	Neither disagree nor agree	Strongly Agree	Agree

16. Did you use a condom from start to finish the last time you had sexual intercourse?

1. Yes	2. No	3. Can't remember

17. Do you have enough supply of condom to last until your next visit to a condom dispenser?

1. Yes	2. No

18. How often do you engage in sexual intercourse per week?

Once	Twice	Trice	Four-to Five times	More than six times

19. Was there a time when you had to engage in sexual intercourse but you had run out of condoms?

1. Yes	2. No

I. If, your answer above is 'Yes', what did you do?

.....

.....

.....

20. How often do you use a condom?

1. Always	2. Sometimes	3. Never

21. When/ with whom do you have sex without a condom?

1. Regular partner	2. Casual once off partner	3. Never

22. Which of these scenarios do you find most risky to have sex without a condom?

1. your regular partner who is HIV negative
2. your regular partner who is HIV positive
3. a sex worker
4. a person of unknown HIV status
5. a person who is HIV positive
6. None of the above

23. Under what circumstances would you have sexual intercourse without condom?

With your spouse regardless of her/his HIV status	With the person you have been fantasizing about	When having sex with a person for the first time	With a virgin

24. Which of these scenarios you would refuse to engage in sexual intercourse without condom

1. your regular partner who is HIV negative
2. your regular partner who is HIV positive

- 3. a sex worker
- 4. a person of unknown HIV status
- 5. a person who is HIV positive
- 6. None of the above

25. Did you have sex without a condom in the last two months?

1. Yes	2. No

26. In the past two months, how many times did you engage in sexual intercourse without a condom?

Once	Twice	Trice	Four-to Five times	More than six times

F. Factors associated with non use of condoms

27. What things can make it hard to use condom during sexual intercourse?

- 1) Spoils the pleasure []
- 2) Fear of rejection and violence []
- 3) A sign of lack of trust in one's partner []
- 4) Religious beliefs []
- 5) Drunk alcohol []
- 6) Other (specify)

II. **28.** Why do you think patients who are on antiretroviral therapy should use a condom during sexual intercourse?

.....

.....

.....

(G) Perceptions towards condom use

In this section, please tick the appropriate response

29. Are condoms really safe and effective to prevent HIV infection?

1. Yes	2. No	3. Not sure

30. Is it still necessary to use a condom even if both sexual partners are HIV positive?

1. Yes	2. No

31. Do you think you should always use a condom if you are HIV positive?

1. Yes	2. No	3. Don't know

III. **32.** If NO, what are the reasons?.....

.....

.....

IV. **33.** How does a person who is on antiretroviral therapy practice safe sex?.....

.....

34. Reasons for not using a condom at last sex with regular partner

- 1) Partner is HIV-positive
- 2) Don't like using condoms
- 3) Did not know about using condoms for this disease
- 4) Did not feel the need to use condoms
- 5) Found it difficult to discuss condoms
- 6) Did not have condoms at hand
- 7) Never used condoms
- 8) Not disclosed status to partner
- 9) Condoms take away romance from sex
- 10) Would make partner suspicious
- 11) Condoms are difficult to use

Thank you for taking time to participate in this interview

Appendix 2

Consent Form



UNIVERSITEIT • STELLENBOSCH • UNIVERSITY
jou kennisvenoot • your knowledge partner

STELLENBOSCH UNIVERSITY CONSENT TO PARTICIPATE IN RESEARCH

An investigation of the utilization of condoms as a method of prevention against HIV Re-infection among Antiretroviral Therapy patients at Aliwal North Hospital.

You are asked to participate in a research study conducted by SIMPHIWE DENNIS SANDLANA who is a MASTER OF PHILOSOPHY student, from African Center for HIV and AIDS management, Faculty of Economic Management Sciences at Stellenbosch University. The results of the study will be contributed to the Thesis that he is writing. You were selected as a possible participant in this study because you have started Antiretroviral Treatment at Aliwal North Hospital.

1. PURPOSE OF THE STUDY

The purpose of the study is to contribute to the knowledge of utilization of condoms by patients who are on antiretroviral treatment as a method of prevention of HIV re-infection. Specifically, this study is conducted to answer the following research question: What is the extent of utilization of condoms among patients who are on antiretroviral treatment at Aliwal North hospital Wellness Clinic? The answer to the above question would confirm whether patients on antiretroviral treatment at Aliwal North hospital do use condoms. Furthermore, the answer would shed some light on the challenges faced by ART patients in relation to the use of condoms. Lastly the answer would shed further light on intervention solutions to challenges faced by patients on ART who use condoms.

2. PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

The research is very important and your sincerity in answering the questions is highly encouraged. Your participation in the study is voluntary, and that your non-participation would not compromise your quality of care or treatment. In

addition, confidentiality would be maintained and that there will be no time where you would be required to identify yourself by name. Lastly, if you agree to participate in the study, you would be required to sign the Consent Form.

The research would be conducted in one session which would take about 30 minutes. The research would be conducted at the Consultation Room at the Aliwal North HOSPITAL'S Wellness Clinic.

After completion of the study, the raw data will be kept in a locked cabinet where there will be no access to people other than the research team. A password would be used to protect access to electronic data.

3. POTENTIAL RISKS AND DISCOMFORTS

The research does not pose any risks whether physical or psychological that would warrant the termination of the study. However, should you, the participant become traumatized by the questionnaire, you would be referred to either a Psychologist or to Nurses at the Wellness Clinic for counseling and to Social Workers for other support services.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

Participating in the research study will not yield any direct benefits; however, the findings of the research will be shared with the Department of Health so that policy-makers will be better informed about the extent of condom utilization by patients who are on antiretroviral treatment.

5. PAYMENT FOR PARTICIPATION

No payment will be received by participating in the research study.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of designing a questionnaire that would not require participants to identify themselves by name. Secondly, research questionnaire would be kept under lock and key and only the investigators would have access to the data. The information obtained by the investigators by virtue of them participating in the research would not be revealed to anyone other than the research and his/her team.

Since the research is part of my MPhil studies, it will be kept in the database of the Faculty of Economic and Management Sciences at the University of Stellenbosch. The results may be shared with students who are in the same field of study to increase knowledge and to encourage further research. In addition, the Department of Health at Ukhahlamba District would be informed about the findings of the research.

A questionnaire would be used, therefore there would be no audio or videotape.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigators may withdraw you from this research if circumstances arise which warrant doing so. If a participant is mentally challenged his/her participation will be terminated without regard to the subject's consent.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact: Mr. Simphiwe. D. Sandlana, (The Principal Investigator) who resides at No 13 Buffelsbron Flats, Levy Street. Aliwal North. 9750. His cell-phone number is 084 653 0214 and the e-mail address is ssandlana@brhc.com. The Co-Investigator is Ms. Mpitsuwa Molise, who is a nurse at the Aliwal North hospital's Wellness Clinic. She resides at 29 Grey Street. Aliwal North, 9750. Her cell-phone number is 076 396 5980 and her e-mail address is Mpitsuwa.Molise@impilo.ecprov.gov.za

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to [me/the subject/the participant] by [name of relevant person] in [Afrikaans/English/Xhosa/other] and [I am/the subject is/the participant is] in command of this language or it was satisfactorily translated to [me/him/her]. [I/the participant/the subject] was given the opportunity to ask questions and these questions were answered to [my/his/her] satisfaction.

[I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.] I have been given a copy of this form.

Name of Subject/Participant

Name of Legal Representative (if applicable)

Signature of Subject/Participant or Legal Representative

Date

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____ [name of the subject/participant] and/or [his/her] representative _____ [name of the representative]. [He/she] was encouraged and given ample time to ask me any questions. This conversation was conducted in [Afrikaans/*English/*Xhosa/*Other] and [no translator was used/this conversation was translated into _____ by _____].

Signature of Investigator