

**CORRELATES OF CONDOM USE AMONG WOMEN OF REPRODUCTIVE AGE  
IN NIGERIA: EVIDENCE FROM 2007 NATIONAL HIV/AIDS AND  
REPRODUCTIVE HEALTH SURVEY (NARHS)**

**SIMEON OLAWUWO**

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UNIVERSITY OF IBADAN, IBADAN**

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# CERTIFICATION

This is to certify that this project was carried out under our supervision by SIMEON OLAWUWO in the Department of Epidemiology and Medical statistics, Faculty of Public Health College of Medicine, University of Ibadan.

---

**Prof. Olusola Ayeni**  
**B.Sc. (IB), MSc (Med stat) (Lond)**  
**Professor of Medical Statistics,**  
**Department of Epidemiology and Medical statistics**  
**Faculty of Public Health, College of Medicine, University of Ibadan.**

---

**Dr. O.M Akpa**  
**B.Sc., MSc., PhD Ilorin**  
**Department of Epidemiology and Medical statistics**  
**Faculty of Public Health, College of Medicine, University of Ibadan.**

# DEDICATION

This dissertation is dedicated to the ALMIGHTY GOD.

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## ACKNOWLEDGEMENTS

My gratitude goes to the Lord who has helped me and favour me to successfully carry out this research work. You have been my Emmanuel not leaving me alone when going through thin and thick of life; truly, you are my comforter and helper.

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## Abstract

In Nigeria, studies have confirmed high prevalence rates of the HIV/AIDS pandemic among the poor, majority of who are women of childbearing age. The number of HIV-positive children is increasing, with mother-to-child transmission as the principal route of infection. Since good health is basic to human welfare and a fundamental objective of social and economic development, this study provides insight into what exposes Nigeria women to high risk of HIV. Data were collected by personal interview method using structured and semi-structured questionnaire. A sample of 5360 subjects was selected through multi-staged sampling process. The subjects are females of reproductive age (15 to 49 years old).

Preliminary findings showed that the prevalence of condom use was very low with only 22.6% being ever users. Knowledge of HIV transmission was still low among the respondents; only 26.8% knew the correct ways of contracting HIV.

The prevalence of ever use of condom was highest among respondents aged 20-24 years (29.1%) and lowest among teens (11.8%).

Respondents age 15-19 are 2.8 times more likely to have ever used condom compared to those who were 25 years and above (OR=2.759, 95% CI; 1.925-3.955). The odds of ever use condom was 95% lower among respondents who had their first sex before age 20 compared to those who had their sex when they were 25 years and above. It was revealed that educational attainment is negatively associated with ever use of condom. It was also shown that women in the poorest group are 44% less likely to have ever used condom while those in the middle class are 26% less likely to have ever used condom compared to those who are in the richest group. Urban dwellers are 1.5 times more likely to have ever use condom compared to their rural counterparts. Women who are having multiple sexual partners are 2.1 times more likely to have ever used condom compared to those who do not while respondents who took alcohol are 1.3 times more likely compared to those who do not take alcohol and the odds of ever use condom was 28% higher among women with no knowledge of HIV transmission routes compared to those with accurate knowledge of HIV transmission routes.

In Conclusion, the study affirmed the linkage between alcohol use, and HIV/AIDS in one hand and also between religion and risky sexual behavior on the other hand. Knowledge of HIV/AIDS, mode of transmission and prevention is still not very high among the respondents. Also, the cultural practice of multiple sexual partners is of serious concern in both the spread and risk sustaining factor of HIV/AIDS. Efforts at combating HIV/AIDS should take cognizance of Nigerian women many of whom may be difficult to reach through media.



# CHAPTER ONE

## 1.1 INTRODUCTION

Low condom use and multiple concurrent sex partners are major components fueling the spread of HIV in sub-Saharan Africa. Person-to-person sexual contact is known to be a primary pathway through which sexually transmitted infections (STIs) including HIV/AIDS spread (WHO). Cultural and environmental factors play an important role in variations in sexual practices across regions and societies.

In Nigeria, like elsewhere in sub-Saharan Africa, women of reproductive age are greatly vulnerable to STIs as they engage in risky sexual behaviours, such as unprotected sex, multiple sexual partners and a times sex under the influence of alcohol.

Nevertheless proper and consistent condom use has been acknowledged to be effective towards successful prevention of STIs, including 80 – 90% of heterosexual transmission of HIV, Heart Chan (2004).

Despite this reality, prevalence of condom use in sub-Saharan Africa is still low and inconsistent. Objections to condoms due to allegations that condoms inhibit the enjoyment of sex, condoms cause sores on a penis, condoms come off inside a women and it is a sin to waste semen and prevent pregnancy are widespread in sub-Saharan Africa; Travory and Swidler (2009) from a religion point of view, there are also sanctions against condom use among Catholics and some evangelists asserting that it fuels promiscuity; Bond and Dover (1997). Promoting condoms is also considered as encouraging sexual acts among the younger ones. Sexual partners tend to use condoms at first, only to stop later in subsequent sexual contact (without testing for HIV) whom their



relationship deepen due to claims that using a condom connotes distrust or absence of intimate love (Holland et al. (1991).

Women of reproductive age are very important in the societies because they are the channel through which human population is increasing. Their attitudes towards the prevention of the most deadly disease (HIV) is important and is necessary to be studied to possibly reduce the transmission of the disease. HIV/AIDS is now rated as the largest cause of death in the world, Dadkha (2008). This dreadful disease seriously threatens the existence of human societies globally, Alao (2004). It is a known fact that mother-to-child transmission is a major route of HIV infections an estimated 220,000 children are living with HIV, most of who became infected from their mothers.

Women are harder hit by the epidemic in Africa than are men. About 55% of all adults living with HIV/AIDS are women, Delay et al. (2000). The difference in infection between men and women is most pronounced in those under 25 years of age. While the reasons for the extremely high rates in girls are not fully understood, the vulnerability of young girls certainly plays a role. Women in Nigeria generally have little control over sex in their relationships, which leaves them vulnerable to infections acquired by their male counterparts. In such relationships women are clearly at a disadvantage in demanding the use of condoms to protect themselves from the risk of HIV infection.

Human beings are complex creatures. Some get pleasure out of risk taking while others prefer to avoid risk if they are able to choose. It is useful to examine the implication of people's attitude to particularly risk situations such as engaging in unprotected sex, having multiple sex partners, and others without the use of condoms. It must be stressed that the cost that carefree sexual behaviour bears on the government,



individuals' meagre/insufficient resources cannot be ignored. Premature death is a certainty to those who contract the virus. Medical care received by such patients run into tens of millions of Naira. It is expected that individuals should be concerned about managing their health risks, specially the risk being without sufficient income or means of paying for care in the event of an illness, injury or disability. Carefree attitude begets devastating consequences. Hence, irresponsible sexual behaviour should be avoided.

## 1.2 PROBLEM STATEMENT

Research in sub-Saharan African indicates that HIV/AIDS epidemic affects the public sector in terms of increasing staff morbidity, absenteeism, death, workload and turnover. It reduces staff morale, experience and efficiency. It increases the costs on staff medical bills and expenses on death benefits and funerals.

Risky sexual behaviours/practices are strongly linked to the spread of AIDS, and because AIDS is a highly stigmatized condition, most people who indulge in risky sexual practices are unwilling to disclose related information. Although data documenting the extent of the practice are very scanty: some studies (Single and Bankole, 2000) provide evidence that the practice of sexual intercourse with multiple partners is widespread in Sub-Saharan Africa with quite a substantial number of women reported having two or more partners. The risks associated with sexual behaviours have not been thoroughly investigated but it is known that they are seriously connected with the risk of becoming infected with HIV/AIDS and many women of child bearing age do not seriously consider these risks have been found to currently increase the spread of HIV in Nigeria. Even though some studies have examined the sexual behaviours that are responsible for the transmission of HIV in Nigeria, not much have been done describing the



characteristics of those who engage in unprotected intercourse even when faced with the possibility of the infection with HIV and other sexually transmitted disease

### **1.3 GENERAL OBJECTIVE**

To describe the correlates of condom use and other HIV risk behaviours among women of Reproductive Age in Nigeria.

#### **Specific Objectives**

- i. To determine the prevalence of some of the HIV risk behaviours among women of Reproductive Age in Nigeria.
- ii. To find out what socio-economic factors are associated with the use of condom among women of reproductive age.
- iii. To assess the association between awareness of HIV/AIDS and condom knowledge and use.

### **1.4 RESEARCH QUESTIONS**

1. What is the prevalence of condom use, multiple sexual partners, alcohol use and knowledge about the HIV/AIDS among women of reproductive age.
2. What is the association between each of the following socio-economic variables: educational attainment, marital status, Religion, Occupation, Alcohol use, Knowledge about HIV and multiple sex partners with condom use.
3. What are the significance of the risk and social demographic factors and the use of condoms.



## 1.5 JUSTIFICATION OF THE STUDY

The prevalence of HIV among women of reproductive age in Nigeria indicates that this population is experiencing a general epidemic. This also confirms that HIV is a major public health problem in the country. There has been an enormous increase in the number of persons infected with HIV in Nigeria since the AIDS epidemic first appeared. In less than a decade, it has caused a huge increase in the death rate. Different measures for reducing HIV transmission have been undertaken by the government and other concerned organizations. Individuals have been encouraged to avoid risky sexual behaviours like prostitution, unprotected sex, multiple sex partners, and rejection of the use of condoms and others. Despite these campaigns through the mass media and encouragements from the government and non-governmental organizations, HIV and AIDS epidemics have continued to grow. Since the health of the mother is basic to the welfare of her children and HIV is a major cause of sickness and death, the risk behaviours responsible for HIV infection should be identified and properly studied.

## 1.6 DEFINITION OF TERMS

- i. HIV: Human Immunodeficiency virus
- ii. AIDS: Acquired Immunodeficiency Syndrome
- iii. Child Bearing Age: This refers to the reproductive age span of women (15 – 49) years of age. This is usually assumed for demographic purposes.
- iv. NACA: National Action Committee on AIDS
- v. PLWHA: People Living with HIV/AIDS
- vi. STD: Sexually Transmitted Disease
- vii. STI: Sexual Transmitted Infection



- viii. UNAIDS: United Nations Programme on AIDS
- ix. WHO: World Health Organisation
- x. NDHS: Nigeria Demographic and Health Survey
- xi. NEACA: National Expert Advisory Committee on AIDS
- xii. HEAP: HIV/AIDS Emergency Action Plan
- xiii. PEPTAR: President Emergency Plan For AIDS Relief
- xiv. UNDP: United Nations Development Programme
- xv. NIAAA: National Institute on Alcohol Abuse and Alcoholism
- xvi. NPC: National Population Commission
- xvii. TFR: Total Fertility Rate
- xviii. IMR: Infant Mortality Rate
- xix. NARHS: National HIV/AIDS and Reproductive Health Survey
- xx. OR: Odds Ratio



# CHAPTER TWO

## LITERATURE REVIEW

### 2.1 CONDOM PROMOTION ACTIVITIES

Condom promotion consists of a combination of activities designed to encourage the acceptance and use of condoms to prevent the sexual transmission of HIV and other STDs. The WHO observes that while ensuring that good quality condoms are affordable and available is essential, potential condom users need to be informed, motivated and inspired to adopt condoms and to sustain such use. Condom marketing programmes use commercial marketing strategies and distribution systems to increase the availability of condoms among large target groups by marketing them at affordable prices in accessible outlets.

Condom distribution programmes must ensure a constant supply of condoms to all sexually active people and to those most vulnerable to HIV infection through public or private channels. Condoms can be distributed at low or no cost through clinics community based distribution, and commercial channels.

### 2.2 CONDOMS

The total numbers of condoms provided by international donors has been relatively low. Between 2000 and 2005, the average number of condoms distributed in Nigeria by donors was 5.9% MAN per year (UNFPA 2005).

Restrictions on condom promotion have hampered HIV prevention efforts. In 2001, a radio advertisement was suspended by the Advertising Council of Nigeria (APCON) for promoting messages suggesting that it is acceptable to engage in premarital



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sex as long as a condom is used. In 2006, APCON also started to enforce stricter regulations on condom advertisement that might encourage 'indecenty'.

The number of female condoms sold in Nigeria has significantly increased from 25,000 in 2003 to 375,000 in 2006.

### **2.3 ACCESS TO MALE AND FEMALE CONDOMS**

Male condoms are generally accepted as a cornerstone of comprehensive HIV prevention; yet expanded access to and use of this proven technology is still facing enormous cultural and policy barriers. For female condoms, the barriers are even greater and much more needs to be done to increase their supply and use. Persistent variations in condom use across regions, countries and populations indicate that condom promotion should be targeted to address socio-cultural, political, economic and structural barriers faced by different groups (e.g. youth, married women and men, discordant couples, sex workers, men who have sex with men, and injecting drug users, among other groups).

### **2.4 ROLE OF CONTRACEPTIVES IN HIV PREVENTION**

Unlike condoms, the role of contraceptives and voluntary family planning services in HIV prevention is not sufficiently recognized, even though preventing unintended pregnancies is one of the four pillars of preventing mother to child transmission (PMTCT). Preventing unintended pregnancies is more cost-effective than providing treatment to prevent perinatal transmission. Family planning services provide clients with critical information about the varying degrees of effectiveness of contraceptive methods for pregnancy prevention, the safety of pregnancy with HIV and contraceptive choices for women living with HIV or AIDS. Family planning services also



educate clients on STI prevention and correct and consistent condom use, Many women living with HIV or AIDS want to have more children and are in need of family planning services to provide counseling on reversible contraceptive methods and on how to prevent mother-to-child transmission of HIV, as well as possible transmission to their husband or sexual partner. At the same time, voluntary family planning services are needed for those women who want to prevent or delay pregnancy. It is estimated that current levels of contraceptive.

## **2.5 FUNDING FOR CONDOMS AND CONTRACEPTIVES**

Condoms and contraceptives are inexpensive and cost-effective technologies, yet cost continues to be a barrier to their availability.

The growing need for condoms and contraceptives worldwide has been met with long-term stagnant funding on the part of donors and only small increases in numbers of commodities. For female condoms in particular, greater support needs to be devoted to their strategic introduction, marketing and programming in countries. International donors and developing country governments need to give due regard to the indispensable role of condoms and contraceptives in HIV prevention.

## **2.6 CONDUCIVE ENVIRONMENT FOR SCALING UP HIV PREVENTION**

There is no doubt that a comprehensive HIV prevention agenda must include condoms and contraceptives, along with other proven prevention strategies. However, as discussed in this report, successful scale-up of condoms and contraceptives for HIV prevention depends upon strong leadership and coordination-for advocacy and policy dialogue, capacity building and resource mobilization. Scale-up also requires a supportive



policy environment-one where policies are based on sound evidence that supports the efficacy of condoms and contraceptives in preventing the transmission of HIV. Likewise, the integration of contraceptives into HIV prevention programs must be supported at all policy levels.

Distributing condoms and contraceptives across a range of networks can help to reduce costs of service delivery and promotion by maximizing the contribution of existing outlets and programs. By limiting subsidized or free condoms to low-income consumers, market segmentation maximizes government and donor investments, freeing up funds for other strategies.

## **2.7 PREVENTION OF HIV WITH THE USE OF CONDOM**

The lessons of the past decades have taught us that there is no silver bullet to HIV prevention, although there is increasing evidence of what works, and replicable models exist. Worldwide, almost half of the people living with HIV or AIDS are women, and in sub-Saharan Africa-where heterosexual transmission is highest -61 percent of those living with HIV or AIDS are women. Preventing unintended pregnancies among infected women and those at risk of infection is essential for preventing mother-to-child transmission of HIV. In fact, all women and couples, irrespective of their HIV status, need access to voluntary family planning services.

Male and female condoms remain the primary technologies currently available to protect individuals from sexual transmission of HIV. While male condoms are generally accepted as a cornerstone of comprehensive HIV prevention, expanded access and use of this proven technology is still facing enormous cultural and policy barriers, and much more needs to be done to increase the supply and use of female condoms.



Much has been written about the components of HIV prevention — with significant attention to the "alphabet" of prevention approaches, including Abstinence, Be faithful and Condoms (ABC), ABC+ and Condoms Needles and Negotiation (CNN), and Azninsl617 However, the success of any approach — whether it be putting on a condom or taking a contraceptive pill depends on human behavior, Dowsett and Couch (2007).

The three primary behaviors that can prevent sexual transmission of HIV — abstaining from sex, having sex with only one uninfected partner at a time, and using condoms—are well-known as the components of the ABC approach. Originating from early sexually transmitted infection (STI) prevention efforts, the ABC approach has a long, established public health history, Hardee et al. (2008). Although recent ideological interpretations of the approach remain contentious, the behaviors themselves are the indisputable building blocks of preventing sexual transmission of HIV.

Evidence supports that delaying sexual debut can reduce the number of future partners and therefore, risk of HIV acquisition 2021 However, a 2007 review of STD/HIV prevention programs in the U.S. found that there is currently no strong evidence to confirm that abstinence-only programs delay sexual initiation, hasten a return to abstinence, or reduce the number of sexual partners.

However, prevention messages that encourage women to have one partner ignore the social realities facing many women. Research in Kenya and Zambia shows that marriage can actually increase risk of HIV among young women.<sup>30</sup> Marriage increases the frequency of sex and hinders women's ability to negotiate condom use or abstain from sex. For young women in particular, husbands tend to be older and tend to have higher HIV prevalence rates than those found among partners of unmarried girls. Promoting "be



faithful" overlooks the possibility that partners in a relationship might unknowingly have different HIV serostatus; Decock et al. (2003).

### **Male And Female Condoms Preventing The Spread Of Stis Hiv, And Unwanted Pregnancies**

Able to block the bodily fluids that carry the HIV virus, condoms are a *highly effective* method of preventing HIV. According to the WHO and the US National Institutes of Health, "intact condoms...are essentially permeable to particles the size of sexually transmitted disease pathogens, including the smallest sexually transmitted virus, UNAIDS (2004). Studies show that condoms are a highly effective method of preventing HIV, with effectiveness rates ranging between 80 to 95 percent, largely depending on how correctly they are used. While no studies have evaluated the specific HIV prevention effectiveness of the female condom, estimates derived from laboratory tests and data on effectiveness for pregnancy prevention indicate that the female condom provides at least the same level of protection as the male condom.

Condoms are an effective prevention method of many STIs other than HIV. Because some STI infections may increase a person's risk of acquiring HIV, preventing STIs may be effective in reducing HIV incidence, Cohen (1998). This is particularly true where HIV prevalence is low, but that of other STIs is high. However, trials have shown mixed results in assessing the impact of STI treatment on preventing HIV. Male condoms are most effective in protecting against STIs spread by discharge, such as HIV, gonorrhea, and chlamydia, but also protect against STIs spread by skin-to-skin contact, such as herpes and human papillomavirus (HPV). Male condoms may also protect against conditions caused by STIs, including recurring pelvic inflammatory disease and chronic



pelvic pain, cervical cancer and infertility. The female condom is at least as effective as the male condom in reducing the risk of contracting sexually transmitted infections, PATH and UNFPA (2006).

Condoms are also an important means of pregnancy prevention and are the mainstay of dual protection (taking measures to prevent both pregnancy and STIs). However, because condoms are less effective for pregnancy prevention than other contraceptive methods dual method use should be promoted among contraceptive users. As commonly used, male condoms are about 85 percent effective for pregnancy prevention. If used consistently and correctly with every sex act, effectiveness for pregnancy prevention is higher — about 98 percent. As commonly used, the female condom is 79 percent effective for pregnancy prevention, whereas it is 95 percent effective with perfect use.

High rates of incorrect use and condom slippage and breakage need to be addressed. The quality of well manufactured condoms is high and, if used properly, they are unlikely to break, however slippage rates can increase the risk of HIV transmission. Only consistent and correct use of the condom offers effective prevention against HIV, and only a small percentage of individuals and couples use condoms in this manner. However, consistent use by a small number of vulnerable people may have a greater impact on reducing HIV transmission than a large number of people who use condoms inconsistently; Brachar and Santow (2004). Some studies show that because their behavior may be riskier in other ways, inconsistent condom users can actually be at higher risk of HIV transmission than those who never use condoms. Condom education



and promotion should therefore be integrated with other HIV prevention strategies to address a range of behaviors.

The female condom is currently the sole available HIV prevention technology that is designed to be initiated by the woman. Female condom promotion and use has been shown to increase the total number of protected sex acts, Hoke et al. (2007).

Studies show that some women view use of the female condom as a means of enhancing safe sex bargaining power. For some male and female users, the female condom has been reported to be more pleasurable than the male condom. However, acceptability has been varied and more operations research is needed to address barriers to uptake and consistent use in a variety of sexual relationships. Although the female condom is available in 108 countries, in many instances it is not readily accessible at shops and clinics. To generate demand and increase availability, greater support needs to be devoted to the strategic introduction, marketing and programming of female condoms in countries.

Regions, countries and populations indicate that condom promotion should be targeted to address socio-cultural, legal and policy, economic and financial and structural barriers faced by different groups (e.g. youth, married women and men discordant couples, sex workers, MSM, IDUs, etc.), Dresin J, MA Torres and K. Daly (2007). Successful interventions highlighted in this report show that programs can bring about increases in condom use when they address the barriers and concerns experienced by different groups.

Young people commonly cite concerns about the effectiveness and quality of condoms—particularly free condoms—as well as concerns that condom use signifies



infidelity or having an STI and that condom reduce pleasure. Aspects of masculine sexuality, pleasure, eroticism and emotion must be addressed if condoms are to be promoted effectively. In a number of studies, trust in a partner is cited as a reason for non-use and young women may sacrifice condom use if it threatens the development of a relationship.

## **2.8 CONDOM USE BY MARRIED PEOPLE**

Consistent condom use remains largely uncommon among married couples and regular partners. An analysis of 23 Demographic and Health Surveys (DHS) from low and middle income countries conducted between 1994 and 2000 found that in eight of the 23 countries, fewer than five percent of women aged 15 to 49 used condoms to prevent STIs.

Condom use within long-term relationships or marriage is commonly perceived as a sign of infidelity, immorality and lack of trust, Drezin, et al. (2007). Among married couples in Nigeria, researchers found that the perceived association of condoms with promiscuity is so strong that women find it difficult, if not impossible, to negotiate condom use. In this context, condom use was dependent on appealing to men's sense of responsibility to their families. In a study conducted among married and cohabiting couples in KwaZulu-Natal, South Africa, only 43 percent of men and 60 percent of women found it acceptable a married women to request that her husband use condoms, Maharaj and Cleland, (2004). In a qualitative study conducted in Ethiopia, Tanzania and around the world, gender-based violence is the most widespread human rights violation, undermining women's autonomy and safety. It is also closely related to condom behaviors and thus HIV risk. A qualitative study in 15 countries found that sexual



coercion most often occurs within consensual unions, by husbands, boyfriends or family members; Heise, Elisberg and Gottmoelier, (2002). In a comprehensive review of the literature on intimate partner violence (IPV) and sexual health, IPV was consistently associated with inconsistent condom use, having an unplanned pregnancy or induced abortion, and having an STI, including HIV, Cooker (2007).

Young people are often more vulnerable to sexual violence. A 2001 survey of 1,753 Kenyan males and females aged 10 to 24 found that 21 percent of females and 11 percent of males had experienced at least one act of sexual coercion. A Tanzanian study found that women living with HIV reported significantly more sexual violence, a greater number of violent partners, and a greater of violent episodes with their current partner than HIV-negative women, Maman et al. (2002). Sex workers are also disproportionately affected by violence. A study conducted among female sex workers in Southwestern China found that 49 percent of women surveyed had experienced sexual violence perpetuated by clients. A qualitative study of 32 sex workers in Moscow, Russia, all respondents reported being arrested and forced to have sex with policemen. Likewise, transgender people, men who have sex with men (MSM) and feminized men are also victims of sexual violence in many societies. To increase crease condom use, particularly among these vulnerable groups, and to protect people's overall health and rights, greater efforts to address this global crisis of sexual and gender-based violence must be made. Zambia, respondents reported that the stigma of infidelity and infection associated with condoms inhibits them from using or suggesting use of condoms. In rural Malawi, initiating a discussion of condom use for preventing infection in marriage is compared to "bringing an intruder into the domestic space, Chimbri (2007).



Condom use may be compromised if women cannot negotiate their use for pregnancy prevention. Furthermore, in some places, risky behaviors of male partners can place pregnant women at tremendous risk. A survey of 279 husbands of women who had recently delivered in south-eastern Nigeria found that 28 percent of the men engaged in extra marital relationships while their wives were pregnant. A large percentage of the men reported that they believed sex during pregnancy causes miscarriage. Condom use is also particularly uncommon as a form of dual protection with sterilization. In a review of the literature, no studies regarding condom use among men with vasectomies were found, Berer (2006). A study conducted in Sao Paulo, Brazil, showed that women who have undergone sterilization are less likely to use condoms than women using other methods of family planning, and that women who had previously used condoms for contraception stopped after sterilization. If Sterilization counseling in settings where HIV is prevalent should include counseling on condom use.

However, evidence has shown that condom uptake can be successfully increased among married couples. In a comprehensive review of condom interventions, studies reported on use within regular partnerships, and nine of those studies reported significant increases in condom use, although only two were among low-risk populations, Foss et al. (2007). In these two low-risk studies- both conducted among married women in Thailand - one reported five percent consistent condom use at six month follow-up after clinic based-counseling (an increase from two percent consistent use at baseline). The second study found that "more frequent" condoms with a spouse rose to 58 percent. While these findings are promising, the level of consistent condom use reported in the first study is



still quite low, and despite being a randomized controlled trial, the second study applied a weak measure of condom use.

Findings of a WHO-sponsored study conducted in six African countries suggest that the influence of husbands and wives on condom use is approximately equal in Kenya, Uganda and South Africa, Pullum et al. (2005). Data from South Africa show that the wife's fear of HIV infection was the most powerful predictor of condom use. These results demonstrate that couples are willing to use condoms at least sometimes if there is a perceived risk of HIV infection. While these results are promising for increasing the acceptability of condom use among married couples, use must be consistent to protect against HIV transmission. Furthermore, a review of 62 studies found that condom use ultimately, depends on male cooperation.

## **2.9 CONDOM PROMOTION AMONG DISCORDANT COUPLES**

In countries where sex outside of marriage is common, sex without condoms within marriage is inherently risky. Data from around the world suggest that married women's greatest risk of contracting HIV is sexual intercourse with their husbands. 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. Because the majority of these couples are not aware of their discordance, 186 promotion of monogamy within marriage without mention of HIV-testing or condom use may actually increase HIV transmission among discordant couples. In mature epidemics, a high proportion of new HIV infections in the region is occurring within married discordant couples, interventions are currently targeting couples.



## **2.10 CONDOM USE AMONG PEOPLE LIVING WITH HIV OR AIDS**

Treatment with HAART is not associated with higher sexual risk behavior. A comparative study of people living with HIV or AIDS on HAART and those receiving preventative therapy (PT)" in Kenya found participants receiving HAART were more likely to report condom use at last sex and consistent condom use with regular partners than those receiving PT. The study also found fewer multiple and casual partners among PLWHA receiving HAART compared with those receiving PT, consistent with findings from Cote d'Ivoire. However, more than 40 percent of all participants in the study did not know the HIV status of their regular partners. HIV care services need to emphasize partner testing and consistent condom use with all partners; Sarna et al (2008).

## **2.11 CONDOM USE AMONG SEX WORKERS AND THEIR CLIENTS**

By the nature of their work, sex workers have multiple concurrent sexual partners. Furthermore, male clients who do not use condoms put sex workers and any other partners they might have at high risk of HIV. Therefore, condom use during commercial sex is critical. Condom promotion among sex workers has proven successful in many contexts.

However, insufficient condom knowledge can be a barrier to correct use of the method. In Benin, high breakage rates are associated with incorrect use among sex workers. Widespread exposure to violence also undermines the ability of sex workers to negotiate condom use and ensure the correct use of condoms.

Generally, the more commercial the relationship, the easier it is for women to negotiate condom use or the more willing men are to use condoms. However, for many



sex workers, the need for income outweighs the perceived consequences of risky sex. In some places, a lack of access to free condoms lowers the likelihood of use.

Clients of sex workers expose their other sexual partners to risk of HIV transmission, particularly regular partners and wives, with whom they are less likely to have protected sex. Although clients are often difficult to reach, they are important to reach with interventions, both to protect them and to prevent the spread of the disease in otherwise low-risk populations.

## **2.12 MEDIA CAMPAIGNS AND PUBLIC AWARENESS**

Addressing HIV-related issues in Nigeria through television drama. As Nigeria is such a large and diverse country, media campaigns to raise awareness of HIV are a practical way of reaching many people in different regions. Radio campaigns like the one created by the Society for family Health are thought to have been successful in increasing knowledge and changing behavior.

In 2005, a campaign was launched in Nigeria in a bid to raise more public awareness of HIV/AIDS. This campaign took advantage of the recent increase in owners of mobile phones and sent text messages with information about HIV/AIDS to 9, 000, 000 people (BBC News 2005).

Another high profile media campaign is fronted by Femi Kuti, the son of Fela Kuti, the famous Afrobeat musician who died of AIDS in 1997. He appears on billboards alongside roads throughout Nigeria with the slogan 'AIDS' No dey show for face' which means you can't tell someone has AIDS by looking at them.



### **2.13 PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV**

Nigeria's programme to prevent the transmission of HIV from mother to child (PMTCT) started in July 2002. Despite efforts to strength PMTCT interventions, by 2007 only 5.3% of HIV positive women were receiving antiretroviral drugs to reduce the risk of mother-to-child transmission. This figure had risen to almost 22% by 2009, but still remained far short of universal access targets which aim for 80% coverage, WHO/UNAIDS/UNICEF (2010). Single-dose nevirapine is no longer recommended for the prevention of mother-to-child transmission. Whilst 19,733, or 9%, of HIV-infected pregnant women received the most effective antiretroviral treatment regimens for PMTCT in 2010, around 6,505 pregnant women still only received single-dose nevirapine.

### **2.14 HIV RISK-TAKING BEHAVIOURS AND HARMFUL DRINKING PATTERS**

There is much debate in the scientific literature about the relationship between certain risky drinking patterns and sexual risk-taking. It has been suggested that heavy drinking patterns may influence sexual risk-taking by affecting judgment and reducing inhibitions, thereby diminishing perceived risk or excusing behaviors otherwise considered socially unacceptable, NIAAA(2002). Expectations surrounding the effects of alcohol (e.g perception that alcohol enhances sexual arousal and performance), Bremis and Dewane, (2007) and personality traits associated with both drinking and sexual risk-taking (e.g impulsive decision -making, stimulus and sensation - seeking), Bryant.(2006) may also influence unsafe sexual practices. HIV transmission rates through sexual contact are also shown to be higher in the presence of harmful drinking patterns, especially among groups



whose behaviors, context, or life styles already place them at risk of acquiring the virus. Therefore, many of those persons at risk of experiencing alcohol - related problems may also be at risk for HIV infection.

Two studies in South Africa reported that 75% of respondents identified local drinking places as public venues where people want specifically to meet new sexual partners and with the intention to engage in sex; Morojele et al., (2006). Research participants reported that low lighting, seductive music, unisex toilets, and lacks of condoms were conducive to sexual intercourse. Where combined with heavy alcohol consumption, these factors were stated to contribute to the incidence of unsafe sex. In Tanzania, for example, local brew sellers and female workers in bars, guesthouses, and restaurants were found to be high risk for STI/HIV exposure; Hoffman et al., (2004).



# CHAPTER THREE

## METHODOLOGY

### 3.1 RESEARCH DESIGN

The study used secondary data. These were obtained from the 2007 national HIV/AIDS and Reproductive Health and Serological Survey (NARHS). These surveys are descriptive and cross-sectional in design.

The 2007 survey was conducted by the National Population Commission (NPC) with technical and financial support from ORC Macro (ICF Macro) and some international organizations.

### 3.2 STUDY POPULATION

The population for the 2007 National HIV/AIDS and Reproductive Health and Serological Survey (NARHS Plus) was all females aged between 15 and 49 years living in Nigeria. A nationally representative sample of females aged 15-49 years and males aged 15-64 years living in households in rural and urban areas in Nigeria was drawn from the updated master sample frame of rural and urban localities developed and maintained by the National Population Commission (NPC). It is a national survey. The study area consists of all the 36 states of the federation and the Federal Capital Territory

Probability sampling was used for the survey. The sampling procedure was a (four-level) multi-stage cluster sampling aimed at selecting eligible persons with known probability. Stage 1 involved the selection of rural and urban localities. Stage 2 involved the selection of Enumeration Areas (EA) within the selected rural and urban localities. Stage 3 involved the listing of eligible individuals within households while stage 4 involved selection of actual respondents for interview and testing. Overall,



11,822 respondents were selected for interview of which 11,521 were successfully interviewed resulting in a 2.5% non-response rate.

### **3.3 DATA QUALITY**

Being a nationally representative survey, the NARHS implementation team reported numerous efforts made to minimize both sampling and non sampling errors. Some of such measures involved: the use of multi stage sampling method, intensive training of supervisors, field editors, interviewers, quality control personnel and data processing personnel. Nevertheless, sampling errors were calculated for selected variables and can be obtained from the final report of the 2007 NARHS published by the National Population Commission (NPC) and ORC Macro.

### **3.4 DATA COLLECTION**

Data were collected by personal interview method using structured and Semi-structured questionnaire in order to enhance objectivity and independence research agency was contracted. The agency recruited supervisors and interviewers and trained them.

Because of the multiplicity of languages in Nigeria, key words/ phrases in the questionnaire were translated into local languages. There was one team per state (except Lagos and Kano where two teams each were required because of the population size.

The survey captured; among others are the following broad themes:

1. Socio demographic characteristics
2. Sexual behavior
3. Knowledge and treatment of STIs'



4. Knowledge and perception of HIV/AIDS
5. Condom accessibility and use
6. Stigma and discrimination
7. Reproductive rights and violence against women
8. Awareness of maternal mortality and visco-vaginal fistula and its causes
9. Exposure to health communication
10. Knowledge about family planning
11. Attitude and use of family planning
12. Availability, affordability and accessibility of family planning products
13. Reproductive rights and violence against women
14. Awareness of Maternal mortality and visco-vaginal fistula and its causes
15. Exposure to Health Communication

### **3.5 DATA ANALYSIS**

In order to test for independency of infection of HIV on the socio- demographic variables, the chi-square statistics was employed. To examine the contribution of the risk factor, spread or infection of HIV, logistic regression model was used. Data analyses were carried out with statistical packages for social sciences (SPSS) version 17.

### **3.6 EXPLANATORY VARIABLEES**

The explanatory variables used in the regression includes age, religion, place of residence, educational level, occupation, wealth index and other characteristics relating to women of reproductive age and sexual risk behaviors such as marital status, condom use, multiple sexual partners, knowledge of HIV transmission modes and alcohol intake.



### **3.7 SIMPLE LOGISTIC REGRESSION ANALYSIS (WITH ONLY ONE EXPLANATORY VARIABLE)**

Univariate analysis for the outcome variables for each of the selected explanatory variables was carried out. This was done in order to observe each explanatory variable's effect.

### **3.8 CHARACTERISTICS OF FEMALE RESPONDENTS**

The data was analyzed using frequency tables to highlight the socio-demographic and other relevant characteristics of the female respondents relevant to this study such as: current age of the respondents (which was truncated at 49 years in the data set), age at first marriage, first intercourse as well as their mean and median.

#### **3.8.1 MULTIPLE LOGISTIC REGRESSION ANALYSIS**

Variables were considered for the multiple regression analysis based on their suspicious contributions to the use of condom. The multiple logistic regression was performed to track down those variables that have significant contribution and identify the variables that do not have significant contributions.

#### **3.8.2 THE LOGISTIC REGRESSION MODEL**

Logistic regression was adopted due to the fact that the central idea of this study is to observe the effects of a set of some socio-demographic and risk factors on condom use which is an unobserved continuous variable. Due to the complexity and volume of data considered, SPSS was used to perform the analysis.

However, the relationship between the outcome variables  $Z$  and the probability of the event of interest is to be expressed as follows:



$$\lambda_j = \frac{e^{z_i}}{1+e^{z_i}}$$

$$= \frac{1}{1+e^{-z_i}}$$

$$= \text{Log}\left(\frac{\pi_j}{1-\pi_j}\right)$$

and

$\lambda_j$  is the probability the  $j^{\text{th}}$  case experiences the event of interest

$Z_j$  is the value of the unobserved continuous variable for  $j^{\text{th}}$  case.

The model also assumes that  $Z$  is linearly related to the predictors.

$$Z_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p$$

Simply put, in the logistic regression model, we postulate that the probability,  $P_x$  of condom use for an individual man depends on a set  $X$  of 'n' socio demographic factors  $X_1, X_2, \dots, X_n$  in the following way:

$$P_x = P(F=1 | X) = P(F=0, 1, 2, \dots, 1x)$$

$$\frac{1}{1 + \exp[-\beta_0 + \beta_1 X_1 + \dots + \beta_n X_n]} = \frac{\exp(\alpha + \beta)}{1 + \exp(\alpha + \beta)}$$

As for instance,  $F(\text{age at first sex}) =$

$$\left. \begin{array}{l} 1 \text{ if } 15-19 \text{ years} \\ 2 \text{ if } 20-24 \text{ years} \\ 3 \text{ if } >24 \text{ years} \end{array} \right\}$$

The  $\beta$ 's are parameters that represents the effects of the  $X_i$  on the probability of high condom use. The  $\beta$ 's represents the regression co-efficient which are estimated through an iterative maximum likelihood method and the exponentials of these regression coefficients give the odd ratios in the models.



The odds ratio for high condom use  $\frac{P_x}{q_x}$ , where  $q_x=1-P_x$

is  $\frac{P_x}{q_x} = \exp(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n)$  and

$\text{Log}_e \frac{P_x}{q_x} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n$

Categorical predictor variables having 'n' ( $n > 2$ ) distinct values were used to generate 'n-1' contrast variables which were then entered into the model.

Each category of the independent variable was compared to the reference category and the corresponding statistics - B, standard error, Wald, degree of freedom, significance and Exp B were computed.

In each of the models generated, Exp B represents the ratio change in the odds of condom use for one unit change in the predictor. The constant/constant term indicated in each model represents the intercept of the logistic regression model equation.



## CHAPTER FOUR

### 4.0 RESULTS

#### 4.1 DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

The total number of respondents analysed was 5360. They are females of reproductive age (15 to 49 years old). Out of 5360 respondents, 3086 (57.6%) were 24 years and above, 22.2% were between 15-19 years while only 20.2% were aged 20-24. More than half (51.8%) of the respondents experienced sex debut before they were 20 years old, 31.0% have their first sex when they were 25 years and above while only 17.2% experienced their first sex when they were 20-24 years old. In terms of educational attainment, 37.6% have no formal education, only 19.4% attained primary education and 43.0% have secondary or higher level of education. There was no difference in the proportion of both Christian (49.7) and respondents who practice Islam (49.7) while only 0.6% practice other forms of religion. Out of 5360 respondents, 17.5% own small business, 26.2% were housewife, 21.0% were students and 35.3% with other forms of occupation. More than two-thirds (67.3%) of the respondents were currently in union, 27.3% were never in union and only 5.4% were formerly in union. A higher proportion of the respondents (65.5%) are from rural areas while 34.5% were from urban areas. Out of the 5360 respondents, 1332 (24.9%) were from the North-western region, 13.4% from the North-east, 17.6% from the North-central, 17.1% from the South-west, 12.0% from South-east and 15.0% were from South-south. By ethnicity, we have 37.9% as Hausa/Fulani, 17.4% as Yoruba, 14.9% as Igbo and 29.8% from other ethnic groups. Majority of the respondents do not take alcohol (92.1); only 7.9% reported alcohol use. The prevalence of condom use was very low with only 22.6% being ever users.



Knowledge of HIV transmission was still low among the respondents, only 26.8% knew the correct ways of contracting HIV.

**Table 4.1: Frequency Distribution Of Respondents**

<b>Variables</b>	<b>Frequency (N=5360)</b>	<b>Percentage</b>
<b>Age</b>		
15-19	1190	22.2
20-24	1084	20.2
>24	3086	57.6
<b>Age at first sex</b>		
15-19	2284	51.8
20-24	759	17.2
>=25	1367	31.0
<b>Educational attainment</b>		
No formal education	2012	37.6
Primary	1046	19.4
Secondary or higher	2302	43.0
<b>Marital status</b>		
currently in union	3601	67.3
Never in union	1460	27.3
Formerly in union	292	5.4
<b>Religion</b>		
Islam	2659	49.7
Christian	2663	49.7
Others	31	0.6
<b>Occupation</b>		
own small business	936	17.5
Housewife	1403	26.2
Student	1127	21.0
Others	1894	35.3



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**Alcohol use**

Yes	416	7.9
No	4853	92.1

**Knowledge about HIV**

Yes	1434	26.8
No	3924	73.2

**Multiple sexual partner**

Yes	94	2.9
No	3133	97.1

**Ever use of condom**

Yes	739	22.6
No	2533	77.4

**Location**

Urban	1847	34.5
Rural	3513	65.5

**Zone**

North West	1332	24.9
North East	717	13.4
North Central	942	17.6
South West	917	17.1
South East	639	12.0
South South	800	15.0

**Ethnicity**

Yoruba	930	17.4
Igbo	799	14.9
Hausa/Fulani	2032	37.9
Others	1599	29.8

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## 4.2 UNIVARIATE ANALYSIS OF FACTORS ASSOCIATED WITH CONDOM USE

Table 4.2 shows the result of cross tabulation of condom use against each of the following independent variables: Age at first sex, Educational attainment, Marital status, Religion, Occupation, Knowledge about HIV, Multiple sexual partner and location.

### 4.2.1 Age

Table 4.2 shows that age of respondents was significantly associated with ever use of condom ( $p < 0.05$ ). The prevalence of ever use of condom was highest among respondents aged 20-24yrs (29.1%), and lowest among teens, (11.8%).

### 4.2.2: Age at first sex

Ever use of condom was very low (10.4%) among respondents who were 25 years and above before their first sex compared to those who were in their teens (25.9%) or those in their early 20's (34.9%). This association however is statistically significant at  $p < 0.05$ .

### 4.2.3: Educational attainment

From table 4.2, respondents with no formal education had a lowest prevalence of ever use of condom (5.3%) while those with secondary or higher education had the highest prevalence of condom use (29%). Education attainment of respondents is significantly associated with ever use of condom at  $p < 0.05$ .

### 4.2.4: Marital status

Table 4.2 further revealed that 22.1% who were currently in union were ever users of condom, 24.0% among those who were never in union and 20.3% of those who were formerly in union. The pattern however shows that the prevalence of condom use is highest among those in union. This association is not statistically significant ( $p = 0.364$ ).



#### **4.2.5: Religion**

The prevalence of ever use condom was 12.1% among the Muslim, 28.1% among Christians and only 11.1% among those who practiced other forms of religion. Religion is associated with condom use.

#### **4.2.6: Occupation**

From table 4.2, the prevalence of ever use of condom was highest among women with other forms of occupation (25.9%), followed by women who owned small business (24.1%) and 22.1% among those who were students, and least among those who were housewife (13%). However, the association is statistically significant.

#### **4.2.7: Alcohol**

From table 4.2, 35.1% of respondents who took alcohol have ever use condom while the rate of those who do not take alcohol but have ever use condom was 20.9%. Alcohol use was significantly associated with ever use of condom at  $p < 0.05$ .

#### **4.2.8: Multiple Sexual Partners**

Furthermore, from table 4.2, 51.8% of those who have multiple sexual partners have ever use condom. The rate among respondent that did not have multiple sexual partners was 27.7%. This association is statistically significant at  $p < 0.05$

#### **4.2.9: Location**

Also, 26% of urban dwellers have ever use condom compared with 19.8% from rural areas. This association is statistically significant at  $p < 0.05$ .

#### **4.2.10: Zone**

The pattern of condom use was highest in South-South region (30.2%), followed by South-West (28.6%), North-Central (23.5%), South-East (23.3) and very low in



North-West (8.0%) and North-East (8.1%) respectively. Region is significantly associated with condom use.

#### 4.2.11: Ethnicity

The use of condom by ethnic group is low. The prevalence of condom use was highest among respondents who were Yoruba (29.5%), followed by Igbo women (26.3%) and those from other ethnic groups (25.0%) while it was less than one-tenth of Hausa/Fulani women (6.6%) that have ever use condom. It is a significant association.

**Table 4.2: Univariate analysis**

Variables	Ever use of Condom		X <sup>2</sup>	P-value
	Yes	No		
<b>Age</b>				
15-19	75 (11.8%)	560 (88.2%)	60.711	0.000
20-24	204 (29.1%)	497 (70.9%)		
>24	460 (23.8%)	1476 (76.2%)		
<b>Age at first sex</b>				
15-19	365 (25.9%)	1042 (74.1%)	132.922	0.000
20-24	220 (34.9%)	410 (65.1%)		
>24	90 (10.4%)	772 (89.6%)		
<b>Educational attainment</b>				
No formal education	31 (5.3%)	554 (94.7%)	150.082	0.000
Primary	140 (19.3%)	584 (80.7%)		
Secondary or higher	568 (29.0%)	1392 (71.0%)		
<b>Marital status</b>				



Currently in union	451 (22.1%)	1594 (77.9%)		
Never in union	257 (24.0%)	814 (76.0%)	2.020	0.364
Formerly in union	31 (20.3)	122 (79.7%)		
<b>Religion</b>				
Islam	133 (12.1%)	967 (87.9%)		
Christian	604 (28.1%)	1548 (71.9%)	107.579	0.000
Others	2 (11.1%)	16 (88.9%)		
<b>Occupation</b>				
Own small business	155 (24.1%)	489 (75.9%)		
Housewife	66 (13.0%)	440 (87.0%)	35.486	0.000
Student	187 (22.1%)	659 (77.9%)		
Others	331 (25.9%)	945 (74.1%)		
<b>Alcohol use</b>				
Yes	144 (35.1%)	211 (64.9%)	33.785	0.000
No	605 (20.9%)	2288 (79.1%)		
<b>Knowledge about HIV</b>				
Yes	159 (18.8%)	688 (81.2%)	9.539	0.002
No	580 (23.9%)	1844 (76.1%)		
<b>Multiple sexual partner</b>				
Yes	44 (51.8%)	41 (48.2%)		
No	559 (27.7%)	1459 (72.3%)	23.094	0.000
<b>Location</b>				
Urban	386 (26.0%)	1101 (74.0%)		
Rural	353 (19.8%)	1432 (80.2%)	17.734	0.000
<b>Zone</b>				
North West	33 (8.0%)	381 (92.0%)		



North East	25 (8.1%)	285 (91.9%)		
North Central	140 (23.5%)	456 (76.5%)		
South West	223 (28.6%)	557 (71.4%)	125.883	0.000
South East	120 (23.3%)	396 (76.7%)		
South South	195 (30.2%)	451 (69.8%)		
<b>Ethnicity</b>				
Yoruba	229 (29.5%)	548 (70.5%)		
Igbo	173 (26.3%)	484 (73.7%)	127.182	0.000
Hausa/Fulani	44 (6.6%)	621 (93.7%)		
Others	293 (25.0%)	880 (75.0%)		

Table 4.3 shows the results of multiple logistic regression of condom use on: Age, Age at first sex, Educational attainment, Religion, Occupation, Wealth status, Alcohol use, Knowledge about HIV and multiple sexual partners.

#### 4.3 PREDICTORS OF CONDOM USE

From table 4.3, respondents aged 15-19 are 2.8 times as likely to have ever use condom compared to those who were 25 years and above (OR=2.759, 95%CI: 1.925-3.955) while women who were 20-24years old are 2.2 times as likely to have ever use condom compared to those who were 25years and above (OR=2.180, 95%CI: 1.612-2.948).

The odds of ever use of condom was 5% lower among respondents who had their first sex before aged 20 (OR=0.947, 95%CI: 0.662-1.354) compared to those who had their first sex when they were 25years and above. However, the odds of ever use of condom was 19% higher among respondents who had their first sex when they were 20-



24years old compared to those who had theirs when they were 25years and above (OR=1.187, 95%CI: 0.816-1.725).

Also, table 4.3 revealed that educational attainment is negatively associated with ever use of condom. The odds of ever use of condom was 66% lower among respondents with no formal education (OR=0.240, 95%CI: 0.136-0.422) and 26% lower among those with primary education (OR=0.741, 95%CI: 0.552-0.996) compared to those with secondary or higher level of education.

Furthermore, table 4.3 shows that respondents in the poorest group are 44% less likely to have ever use condom (OR=0.563, 95%CI: 0.357-0.887) while those in the middle class are 26% less likely to have ever use condom compared to those who are in the richest group (OR=0.738, 95%CI: 0.557-0.997). Also, the odds of ever use of condom was 28% lower among women who owned small business compared to those with other forms of occupation (OR=0.719, 95%CI: 0.542-0.955) while the odds was 26% higher among students compared to those with other forms of occupation (OR=1.255, 95%CI: 0.882-1.786).

Moreover, urban dwellers are 1.5 times as likely to have ever use condom compared to their rural counterparts (OR=1.485, 95%CI: 1.135-1.944). The odds of reporting ever use of condom was 83% higher among women who were Yoruba (OR=1.830, 95%CI: 1.124-2.980) and 48% higher among the Igbo (OR=1.477, 95%CI: 0.908-2.404) while the odds was 52% lower among the Hausa/Fulani women (OR= 0.480, 95%CI: 0.273-0.848).

Multiple sexual partners is positively associated with ever use of condom (table 4.3). Women who reported having multiple sexual partners are 2.1 times as likely to have



ever use condom compared to those who do not (OR= 2.114, 95%CI: 1.226-3.645) while respondents who took alcohol are 1.3 times as likely to have ever use condom compared to those who do not take alcohol (OR=1.270, 95%CI: 0.901-1.790) and the odds of ever use of condom was 28% higher among respondents with no knowledge of HIV transmission routes compared to those with accurate knowledge of HIV transmission routes (OR=1.281, 95%CI: 0.965-1.7)

**Table 4.3: Predictors Of Condom Use By Socio-Demographic And Behavioural**

<b>Factors.</b>			
<b>Variables</b>	<b>OR</b>	<b>95%CI</b>	<b>P-value</b>
<b>Age</b>			
15-19	2.759	1.925-3.955	0.000
20-24	2.180	1.612-2.948	0.000
>24	RC	RC	RC
<b>Age at first sex</b>			
15-19	0.947	0.662-1.354	0.765
20-24	1.187	0.816-1.725	0.370
>24	RC	RC	RC
<b>Educational attainment</b>			
No formal education	0.240	0.136-0.422	0.000
Primary	0.741	0.552-0.996	0.047



Secondary or higher	RC		RC	RC
<b>Religion</b>				
Islam	3.329		0.364-30.419	0.287
Christian	5.667		0.628-51.121	0.122
Others	RC		RC	RC
<b>Occupation</b>				
Own small business	0.719		0.542-0.955	0.023
Housewife	0.589		0.385-0.900	0.015
Student	1.255		0.882-1.786	0.207
Others	RC		RC	RC
<b>Alcohol use</b>				
Yes	1.270		0.901-1.790	0.173
No	RC		RC	RC
<b>Knowledge about HIV</b>				
No	1.281		0.965-1.700	0.086
Yes	RC		RC	RC
<b>Multiple sexual partner</b>				
Yes	2.114		1.226-3.645	0.007
No	RC		RC	RC

RC = Reference category



## CHAPTER FIVE

### DISCUSSION, CONCLUSION AND RECOMMENDATION

#### 5.1 SOCIO- DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

The respondents in this study were women of reproductive age (15- 45 years old). The study examined women because female generally stand a higher chance of experiencing early coital debut, coital contact with persons suspected to have HIV/AIDS or engage in prostitution, coital contact for monetary rewards, unprotected sex and premarital pregnancies/abortions. This is mainly attributed to quick sexual maturation of females and their excessive dependency on males for survival. These circumstances partly explain the comparative high HIV infection rates in females relative to males.

The study showed that more than half (51.8%) of the women experienced sex debut before they were 20 years old. This is similar to findings in the NDHS (2008) where among young people of age group 15-19 years, 43% of the female had engaged in sex. This finding is consistent with a previous study which showed that lack of control over relationship was associated with a lower likelihood of consistent condom use and an increase risk of HIV infection among young women age 15 to 24; Pettiford et al. (2004).

In this study, more than a third (37.6%) of the respondents had no formal education while 19.4% had primary education. It has been discovered from previous studies that educated people have access to information about different ways in which HIV is spread but least or uneducated persons are hostage to practices that perpetuate HIV infection. It has also been reported that the total literacy rate in Nigeria is 57.1% of the total population (NPC 2009) and in this study, 43.0% of the women had secondary or higher education.



Least educated persons seldom inform others about HIV/AIDS preventive information and care. These factors increase the risk of HIV infections.

This agrees with the finding in the National Demographic Health Survey (2008), in which about 36% of the women have no formal education.

In the study, there was no difference in the proportion of both Christians (49.7%) and women who were Muslims (49.7%). Religion plays a prominent role in the provision of sex education in Nigeria. It has been shown that attempts at providing sex education for young people have been hampered by religious and cultural objections.

This study also showed that more than two-thirds (67.3%) of the respondents were currently in union (this implied they were either married or living with sexual partners). This is similar to the finding in the NDHS (2008) where about three quarters of the women aged 15-49 years were currently married, cohabiting, divorced or widowed.

A higher proportion of women of reproductive age according to the study were from rural areas while only few were from urban areas. The prevalence of condom use was very low; this might be associated with the fact that the majority were rural dwellers. Their knowledge about contraceptive use was likely low as major sources of information like television and internet facilities are lacking in our rural areas.

It was observed by (Hooper 1992) that the majority of the women were not alcoholic users. Whereas previous studies showed that individuals who consume alcohol and other intoxicating substances are more likely to take sexual risks and some of them do so without using a condom, and in case of a sexually transmitted disease they do not seek medical care due to fear of being diagnosed with HIV. Knowledge of HIV transmission



was very low among the women of reproductive age in Nigeria, this might be because majority of them live in rural areas.

## 5.2 PREVALENCE AND PATTERN OF CONDOM USE

The finding of this study showed that Nigerian women within the reproductive age use condom at a fairly younger age compared to those who are older. This is in agreement with what was found in a study in Uganda which showed that early onset of sex is common among adolescents.

The study showed that educational attainment of Nigerian women is significantly associated with ever use of condom. It was also observed in a study that low school enrollment and high school drop out rate of girls contributes to early sex, pregnancies and marriages. Girls who initiate sex early do so without the use of condom

This study also showed that the prevalence of condom use is highest among those in union. This also agreed with a study in India which showed a prevalence of 52.7% of women adopting a form of family planning method.

The study also showed that religion is associated with condom use. Both Islamic and Christian religion discourage the use of condom, this is the reason the finding is the study show a very low percentage of user of condom in both religions.

The study also revealed that occupation of women determines the level of use of condom. The prevalence of ever use of condom was highest among women who are professionals, followed by women who owned small business and those who were students, and least among those who are housewife. The professionals are more educated, their level of awareness is expected to be higher than that of other who were less educated.



There is a significant link between women who have multiple sexual partners and condom use. It should be noted that the cultural practice of multiple sexual partner is of serious concern in both the spread and risk sustaining factor of HIV/AIDS. Effects at combating HIV/AIDS in developing countries should take cognizance of this category of people who may be difficult to reach through media.

The study revealed that lower percentage of rural dwellers use condom compared to women in urban areas. HIV/AIDS thrive on human ignorance, fear, resistance to change, and poverty. All these exist in rural areas which make the disease a high risk among the poor rural dwellers.

### 5.3 CONCLUSIONS

This study examined the correlates of HIV risk behavior among women of reproductive age in Nigeria. HIV risk behavior identified were early sexual debut, alcohol use, sex under the influence of alcohol and multiple sex partners.

This study revealed that HIV-risk behavior were common and tend to vary with the age, place of residence, level of education and marital status of women of child-bearing age in Nigeria. In particular respondents who reside in rural areas, who were less educated and married as well as alcohol user stand a significantly higher chance of experiencing many of these risk behaviors. Additionally, rural dwellers as well as uneducated individuals rarely have access to HIV/AIDS preventive information, education and care. This constraint undermines ability to appreciate and avoid HIV-risk behavior.



## 5.4 RECOMMENDATION

Based on finding of this analysis, the following recommendations are made;

1. Community and school-based HIV preventive information, educating and counseling programmes should be planned and implemented. These programmes should especially tackle the specific HIV-risk behaviours common among female, rural residents and the least-educated.
2. Government should establish more schools in rural area and make education available and affordable or make the school free to improve the literacy level of rural residents.
3. Information of HIV/AIDs targeted towards the women of reproductive age should concentrate more on radio and television
4. Government should build more health care Centre in rural areas and employ more health care professionals.
5. Efforts at reducing the alarming rate of the spread of HIV should focus more on women of child bearing age with specific programmes targeted towards reducing risk behavior that encourage the spread of the disease.



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