Factors Associated with HIV/AIDS Sexual Risk in Unmarried Women Aged 15-24 in Nigeria

Chinekwu Obidoa
FACTORS ASSOCIATED WITH HIV/AIDS SEXUAL RISK IN UNMARRIED WOMEN AGED 15-24 IN NIGERIA

Chinekwu Obidoa

B.Sc., University of Nigeria, 1999
MA, University of Connecticut, 2003

A Thesis
Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Public Health at the University of Connecticut
2005
Master of Public Health Thesis

Presented by

Chinekwu Obidoa, B.Sc., MA

Major Advisor
Stephen Schensul

Associate Advisor
Judy Lewis

Associate Advisor
Joseph Burleson
ACKNOWLEDGEMENTS

It is with gratitude and respect that I acknowledge the following for helping to make this work a success.

My very deepest appreciation goes first to God Almighty, without whom this work would not have been a reality. I would like to express my sincere thanks to my advisors: Professor Stephen Schensul, Professor Judy Lewis, and Professor Joseph Burleson, for their immeasurable support throughout the course of writing this thesis. Their knowledge, expertise, and meaningful suggestions were invaluable in producing this work. I am especially indebted and deeply grateful to Professor Judy Lewis, who with humane concern and patience provided invaluable advice and mentorship to me throughout my MPH program. She will never really know the extent of the impact she has made on my life. Ma’am, thank you for your untiring encouragement, I will always remain grateful.

I would like to say special thanks to my parents, who encouraged me ceaselessly throughout the course of my study. To my friends at the International Christian Fellowship at the University of Connecticut thanks for supporting me in prayers. Alice Glichrist, Derby Parturzo, and Sylvie Tchumtchoua, thank you for helping me the way you did. I will always remember your kindness.
# Table of Contents

## Chapter One  Introduction  

1.1 Problem Statement  

1.2 Significance of Study  

1.3 Purpose and Objectives of the Study  

1.4 Background of Study: Literature Review  

1.4.1 Factors Associated Sexual Risk-Taking in Young People in sub-Saharan Africa  

1.4.2 Sexual Behavior of Young People in Nigeria  

1.4.3 Factors Associated with Sexual Risk-Taking in Young People in Nigeria  

## Chapter Two  Study Area  

2.1 Overview of Nigeria  

2.1.1 Physical Setting  

2.1.2 Political and Economic Organization  

2.1.3 Population and Demography  

2.1.4 Religious, Ethnic and Linguistic Groups  

2.1.5 Health and Health Care Delivery  

2.2 The HIV/AIDS Epidemic in Nigeria  

2.2.1 Epidemiology  

2.2.2 HIV/AIDS Surveillance  

2.2.3 Response to the Epidemic  

2.2.3.1 National Strategic Framework  

2.2.3.2 National Policy on HIV/AIDS  

## Chapter Three  Data and Methods  

3.1 Data  

3.1.1 National Demographic and Health Survey  

3.2 Research Framework  

3.2.1 Description and Definition of Domains
3.3 Research Methodology 72
  3.3.1 Univariate Analysis 72
  3.3.2 Bivariate Analysis 72
  3.3.3 Multivariate Analysis 73

Chapter Four Descriptive Statistics 74
  4.1 Demographic Characteristics 74
  4.2 HIV/AIDS Awareness 76
  4.3 Empowerment 79
  4.4 The Sexually Active Subset 80
  4.5 The Non-Sexually Active Subset 82

Chapter Five Bivariate and Multivariate Analysis 83
  5.1 Research Question One 83
  5.2 Research Question Two 90
    5.2.1 Socio-demographic Factors and Sexual Behaviors 90
    5.2.2 Empowerment Indicators and Sexual Risk Behaviors 92
    5.2.3 HIV/AIDS Awareness and Sexual Risk Behaviors 94
  5.3 Research Question Three 98

Chapter Six Discussion of Results and Recommendations 101
  6.1 Implications of Findings 108
  6.2 Limitations of Study 109
  6.3 Further Research 112
  6.4 Recommendations for HIV/AIDS Programming 115
    6.4.1 Information, Education and Communication Programs 116
    6.4.2 Community-Based/Contextual Interventions 119
  6.5 Conclusion 128

References 129
LIST OF TABLES

Table 2.1 Demographic Indicators for Nigeria 45

Table 2.2 Estimates of Health Care Personnel & Government Expenditure 49

Table 2.3 Summary of HIV/AIDS Surveillance in Nigeria 55

Table 3.1 Number of Households and Individual Interviews and Response Rates 63

Table 4.1 HIV/AIDS Awareness 77

Table 4.2 Sexual Risk Behaviors 81

Table 5.1 Percentage of Young Unmarried Women Aged 15-24 who Report Having Had Sex by Socio-demographic Characteristics 85

Table 5.2 Percentage of Young Unmarried Women Aged 15-24 who Report Having Had Sex by Empowerment Indicators 87

Table 5.3 Percentage of Young Unmarried Women Aged 15-24 who Report Having Had Sex by HIV/AIDS Awareness Indicators 89

Table 5.4 Summary of Bivariate Associations 97

Table 5.5 Results of Regression Analysis 99
LIST OF FIGURES

Figure 1.1: Young People Living with HIV/AIDS 5
Figure 2.1: Map of Nigeria 42
Figure 2.2: Principal Ethno-Linguistic Groups in Nigeria 47
Figure 2.3a: Pattern of HIV/AIDS Infection in 1999 53
Figure 2.3b: Pattern of HIV/AIDS Infection in 2001 53
Figure 3.1: Research Framework 64
Figure 4.1: Age Distribution of Respondents 75
Figure 4.2: HIV/AIDS Prevention and Transmission Knowledge 78
Figure 4.3: Disapproval of Wife Beating 80
Figure 4.4: Age at First Sex 82
Figure 6.1: A Logic Model Illustrating the Impact of Information, Education and Communication (IEC) Programs aimed at Reducing Young People’s Risk to the HIV/AIDS Infection 125
Figure 6.2: A Logic Model Illustrating the Impact of Community-based/Contextual Interventions aimed at Reducing Young People’s Risk to the HIV/AIDS Infection 126
Figure 6.3: A Logic Model Illustrating the Impact of Community-based/Contextual Interventions aimed at Reducing Young People's Risk to the HIV/AIDS Infection Contd’ 127
CHAPTER ONE

Introduction

Sub-Saharan Africa remains the hardest hit region by HIV/AIDS worldwide, with HIV/AIDS prevalence rates ranging from approximately 2% to 36% in individual countries. HIV/AIDS prevalence rates continue to rise in this region despite intervention efforts. More increases have been recorded in countries in the western part of the continent compared to countries in other parts of the continent within the last five years. The United Nation’s Joint Program on HIV/AIDS estimates that approximately 5 million people are currently living with the HIV virus in western Africa (UNAIDS(f), 2004). Nigeria, (the most populous country in Africa) has the highest number (3.6 million) of HIV patients in West Africa. This growing epidemic calls for research on the factors responsible for the progression of the epidemic in this part of Africa.

Sexual risk-taking among youth has been identified as a major factor facilitating the spread of the epidemic in sub-Saharan Africa. Despite widespread knowledge about the role these behaviors play in the spread of the HIV epidemic, studies investigating the antecedents of these behaviors are not many. As the HIV/AIDS epidemic continues to spread rapidly in Nigeria, there is a need to study the factors that predispose young people especially young women to the infection. Using data collected from the latest National Demographic and Health Survey carried out in the country in 2003, this study
will explore the factors associated with sexual risk behaviors of young women in Nigeria.

This thesis starts by presenting the research problem. Chapter 1 is a literature review, which discusses findings from studies on factors that influence sexual behavior in young people in sub-Saharan Africa, and specifically, Nigeria. Chapter 2 is an overview of the nation of Nigeria and its physical and human geography. The experience of the HIV/AIDS epidemic in the country and the nation's response to the epidemic are described. In Chapter 3, data used for the study, the research framework, and methodology for analysis are presented. Chapters 4 and 5 present the descriptive statistics and results from the bivariate and multivariate analysis respectively. In Chapter six results of analysis are discussed and recommendations for intervention programs made. Suggestions for further research and the limitations of the study are also presented.

1.1 Problem Statement

Despite increasing evidence supporting the fact that the sexual risk behaviors of young people contribute significantly to the spread of the HIV/AIDS epidemic in Nigeria, investigations into the factors that influence the behaviors are few. The majority of the reproductive health studies carried out among young people in Nigeria have focused on describing sexual behavioral patterns in this population. Although these studies provide useful information about the prevalence of sexual risk behaviors in young people, they fail to provide substantial information or explanation about the antecedents of these behaviors. Efforts towards curbing the progression of the
HIV/AIDS infection in Nigeria will remain inadequately informed without an in-depth understanding of the factors that shape these behaviors. Hence, there is an urgent need to examine the factors that influence sexual socialization of young people in the country.

Similar to the epidemics in other countries in sub-Saharan Africa, the Nigerian HIV/AIDS epidemic affects young women disproportionately. The highest HIV/AIDS rates have been recorded among young women aged 20-24. Statistics reveal that by the end of 2001, there were five to eight thousand HIV positive young women aged 15-24 compared to two to four thousand young men (Bankole et al., 2004). The last HIV/AIDS surveillance carried out in the country (2003) found that out of 3,300,000 adults living with HIV/AIDS in Nigeria, 1,900,000 (57%) of them are women (Avert.org, 2005). The continued progression of the HIV/AIDS epidemic in young women in Nigeria raises concern about the factors that increase and prolong their vulnerability to the infection. Since the majority of the young women are infected through sexual contact, understanding the factors that influence their sexual behaviors will contribute to knowledge about their vulnerability to the HIV infection.

This study will explore the factors associated with sexual risk behaviors of unmarried Nigerian women aged 15-24, using data collected from the latest National Demographic and Health Survey carried out in the country in 2003. The National Demographic and Health Survey contains extensive information on the reproductive health of women between 15-49 years, and therefore provides a unique opportunity to study the antecedents of sexual behaviors of young women in the country. It is hoped that findings from this study will provide a better understanding of the factors that fuel
the HIV epidemic in this population and describe the social epidemiology of the HIV infection in Nigeria. It is also hoped that these findings will contribute to the planning and implementation of HIV/AIDS intervention programs in the country.

1.2 Significance of the Study

HIV/AIDS is a major health challenge in countries throughout the world, however; in countries in sub-Saharan Africa it has taken an extraordinary human toll and has emerged as a major public health threat, (Salomon et al, 2001). The first cases of HIV/AIDS in Sub-Saharan Africa were reported in the early 1980s. Uganda reported its first case in 1982, Tanzania in 1983, (Setel et al, 1999); other countries that reported HIV/AIDS cases in the early 80s were Kenya, Burundi, Rwanda and Democratic republic of Congo. By 1987, 37 countries reported at least one case of HIV/AIDS, (Miller and Rockwell, 1988). HIV/AIDS prevalence rates remained relatively low in the 1980s however; in the 1990s HIV/AIDS rates skyrocketed in this region. In 1993, an estimated number of 700,000 children were born to women infected with HIV, (Akeroyd, 1996). Towards the end of 1995, UNAIDS estimated that almost 13 million adults in this region had HIV/AIDS, (UNAIDS and UNICEF, 1996). In 1998, it was estimated that 34 million people in this region were infected with the virus since the start of the epidemic, and 11.5 million people had lost their lives, (UNAIDS, 1998).

In 1999, the “epidemic became generalized (prevalence rates above 1%) in all countries of sub–Saharan Africa with the exception of Mauritania, Somalia, Equatorial Guinea and the Islands in the Indian Ocean”, (Ateka, G.K, 2001 p. 11019). By the year 2000, 2.5 million people were estimated to be infected with HIV “increasing the
average national HIV prevalence among the working population to 8.8% -
approximately 4 million infections occurred during 2000”, (Jama, 2001, p. 3081). In
2001, about 3.5 million people became infected in the region increasing the number of
people infected in the region to 28.5 million, (UNAIDS, 2002), accounting for 68% of
the incidence of HIV/AIDS among the 40 million people infected with HIV, (De Cock
et al, 2002). Currently, 25 million adults and children are living with HIV/AIDS in this
region (UNIADS(f, 2004). Young people have been disproportionately affected by the
pandemic in this region. Data reveals that more than half (63%) of the young people
aged 15-24 infected with AIDS in the developing regions live in sub-Saharan Africa
(UNAIDS(c), 2004). See Figure 1.1. HIV/AIDS is currently the first leading cause of
death among youth in Africa.

Figure 1.1: Young People Living with HIV/AIDS
At the end of 2001, 8.6 million youth in this region were living with the disease (UNICEF, UNAIDS, WHO, 2002). It is estimated that half a million African youth aged 15-24 will die from AIDS by the end of 2005 (Jogunosimi, 2005). The epidemic affects women in this region disproportionately. UNAIDS estimates that “women and girls make up approximately 57% of all people living with the infection in sub-Saharan Africa, where 76% of young people aged 15–24 years living with HIV are female” (UNAIDS(f), 2004, p.3). According to UNAIDS, “on average, there are 36 young women living with HIV for every ten young men in sub-Saharan Africa” (UNAIDS(g), 2004, p.1).

These grim statistics reveal that the HIV/AIDS epidemic affects a considerable proportion of sub-Saharan’s youth population. In response to this epidemic, countries have embarked on numerous programs aimed at reversing the incidence of the disease. A broad range of programs has been implemented; most of these programs have targeted young people. Within the last decade, the number of non-governmental, faith-based, community-based and governmental agencies involved in HIV/AIDS prevention and intervention programming in this region increased remarkably. These agencies are involved in planning and implementation of information, education and communication programs, skill acquisition programs and other programs that encourage behavior change in youth.

Despite the intensification of HIV/AIDS intervention activities in countries in sub-Saharan Africa within the last decade, HIV/AIDS prevalence rates continue to rise in this region. Data from UNAIDS reveal that HIV/AIDS prevalence rates increased in fourteen countries in this region from 2001 to 2003 (Population Reference Bureau
2004). The number of people infected with HIV in this region increased from about 23,000 to 25,000 from 2001 to 2003 (UNAIDS(a), 2004). In 2004, approximately 3.1 million adults and children became infected with HIV in this region (UNAIDS(f), 2004). Although the epidemic has been more severe in the Eastern and Southern parts of Africa, infection rates are beginning to rise in countries in the western part of the continent. More countries in this sub-region of Africa recorded increases in HIV/AIDS prevalence rates from 2001-2003 compared to other parts of the continent (Population Reference Bureau, 2004). Nigeria currently has the highest number (3.6 million) of HIV patients in West Africa. This trend stimulates curiosity about the factors responsible for the progression of the epidemic in West Africa.

West Africa is home to three quarters (73 million) of the continent’s youth aged 10-24 (Population Reference Bureau, 2000). Nigeria, the most populated country in West Africa has exactly half (36.7 million) of this population. Nigeria also has the highest number of youth aged 10-24 in sub-Saharan Africa (Population Reference Bureau, 2000). If strategic steps are not taken immediately to curb the spread of the epidemic in this part of Africa, West Africa may become the next hot spot of the infection on the continent. HIV/AIDS is primarily transmitted heterosexually in Africa. In an attempt to curb the spread of this epidemic, a study of the factors that influence the heterosexual transmission of HIV/AIDS among youth in this part of Africa is therefore necessary and requires urgent attention. Research will lead to a better understanding of the factors that influence the spread of the epidemic in this region as well as provide relevant information about the antecedents of the sexual risk behaviors of a considerable proportion of sub-Saharan Africa’s youth.
This study is a cross-sectional study, which will examine the factors that influence HIV/AIDS risk behaviors of unmarried women aged 15-24 in Nigeria. Unlike other studies carried out in this age group in the country, this study will make use of data collected from a nationally representative sample.

It is hoped that results from this study will provide relevant information about the factors that influence the sexual behaviors of young people in Nigeria, which will in turn contribute to a better understanding of the factors that fuel the epidemic in the country. Findings from this study will provide relevant information about the context in which sexual relations occur in a large proportion of the youth population in sub-Saharan Africa.

1.3 Purpose and Objectives of the Study

The main purpose of this study is to explore the factors associated with sexual risk behaviors in young unmarried Nigerian women aged 15-24.

Specific objectives of this study are to:

1. Assess the influence of HIV/AIDS related risk factors on identified sexual risk behaviors;
2. Determine the most important factors associated with sexual risk behaviors; and
3. Make recommendations for HIV/AIDS intervention in this population.
1.4 Background of Study: Literature Review

1.4.1 Factors Associated with Sexual Risk-Taking in Young People in sub-Saharan Africa

Consistent data from both national and local surveys indicate that sexual risk-taking among young people in sub-Saharan Africa remains high despite the prominent threat of the HIV/AIDS infection. These data show that a large proportion of youth in this region become sexually active at a very young age (Peltzer, 2001; Harrison et al., 2005 and Lema et al., 2002). Many of them have multiple sexual partners, and, of special concern, is the recurrent finding that the majority of them do not use condoms consistently. These sexual behaviors inadvertently expose them to many negative health outcomes such as: infection with sexually transmitted diseases (e.g. gonorrhea, syphilis, chlamydia and HIV/AIDS infection), teenage pregnancy, early marriage and abortion. Infection with the HIV/AIDS virus is the severest consequence of sexual risk-taking among young people in this region. Unfortunately a large number of young people have already contracted the disease and many more are exposed daily to the risk of HIV infection.

In response to the unprecedented increase in the prevalence of the HIV/AIDS infection among young people, public health attention has been directed to the risks associated with unsafe sexual behavior among young people in sub-Saharan Africa. Public health efforts have been aimed at understanding the factors that influence sexual risk-taking in youth in this region.
General theoretical consensus suggests that sexual-risk taking is predisposed by a complex matrix of factors. Most studies focus on the socio-demographic indicators associated with sexual risk-taking in youth. This literature, has also examined the association between young people's awareness of HIV/AIDS and their sexual behaviors. Although still very few, some studies have explored the influence of extra-familial factors such as: socio-cultural factors and socio-environmental factors on the sexual behavioral patterns of youth. Collectively, these studies provide relevant information about the antecedents of sexual risk-taking among young people in sub-Saharan Africa.

This literature review presents the findings from these studies and highlights gaps in the existing knowledge of the predictors of sexual risk-taking in youth in sub-Saharan Africa. Findings will be discussed based on three major predictor domains namely: socio-demographic indicators, HIV/AIDS and related sexual health knowledge and extra-familial factors. These domains are identified in the Health Belief Model as major modifying factors of behavior. Only statistically significant associations from quantitative studies are discussed.

**Socio-Demographic Indicators**

Socio-demographic indicators refer to a constellation of variables that primarily measure the social, economic and reproductive status of individuals. Socio-demographic indicators identified in the studies and which have significant association with sexual risk-taking among youth include: age, educational attainment, ethnicity, religious affiliation, residence type and socio-economic status.
In the studies reviewed, sexual risk-taking connotes the following: ever had sexual intercourse, no condom use during first or last sex, inconsistent condom use and having multiple sexual partners. Age features as an important predictor of sexual activity. A general consensus from the findings is that the likelihood of being sexually active increases with advancement in age (Glover et al., 2003; Onah et al., 2004; Mensch et al., 2001; Karim et al., 2003; Kiragu and Zabin, 1993; Gueye et al., 2001 and Taffa et al., 2003). This was evidenced in studies carried out among adolescents in Ethiopia, Zimbabwe, Ghana, Nigeria, Kenya, and Mali.

However, the likelihood of indulging in safer sexual behaviors did not show a similar trend. Some studies disclosed that the odds of sexual risk-taking was higher in younger adolescents, (Kane, 1993; Karim et al., 2003; Gueye et al., 2001 and Lugoe et al., 1996), while others found that older adolescents were more likely to engage in high-risk behaviors (Slonium-Nevo and Mukuka, 2005; Meekers et al., 2003 and Taffa et al., 2003). The odds of ever using a contraceptive method increased with every increase in age for Malian adolescents (Gueye et al., 2001), while older males in the age bracket of 12-24 in Ghana reported condom use at first sex as well as consistent condom use with last partner (Karim et al., 2003). Meekers et al. (2003) found that older youth aged 20-24 in Cameroon were more likely to have multiple sexual partners; however, they were also more likely to have used condoms. These findings provide evidence that sexual risk-taking is not restricted to younger adolescents. This suggests that advancement in age and the many advantages associated with it including maturation and educational attainment may not be protective against sexual risk-taking.
Findings regarding the link between educational attainment and sexual risk-taking equally varied. Young people who are not enrolled in school were more likely to indulge in different types of sexual risk taking compared to their counterparts who are enrolled in school (Taffa et al., 2003; Gupta and Mahy, 2003; Karim et al., 2003; Rwenge et al., 2000 and Meekers et al., 2003). Among those enrolled in school, some researchers found that their likelihood of engaging in sexual risk-taking decreased with increase in educational level (Gupta and Mahy, 2003; Gage and Meekers, 1994; Lugoe et al., 1996 and Meekers et al., 2003) while others observed the contrary (Karim et al., 2003 and Gupta and Mahy, 2003). Findings from a study carried out to examine the trends and differentials of sexual initiation among adolescent girls and boys in eight countries (Burkina Faso, Cote d’Ivoire, Ghana, Kenya, Mali, Senegal, Tanzania and Zimbabwe) in sub-Saharan Africa, revealed that in all the countries young girls with at least some secondary education were less likely to have had sex during adolescence compared to their counterparts who had no education. This same study revealed that adolescent boys in Mali, Cote d’Ivoire and Senegal with only primary education were more likely to have had their first sexual experience during adolescence compared to their counterparts with no education (Gupta and Mahy, 2003). Karim et al. (2003) found that among Ghanaian youth, educational attainment was positively and directly correlated with the likelihood of being sexually active and of having multiple sexual partners.

While these findings reveal that education serves as a significant determinant of precocious sexual activity, they also disclose that enlightenment obtained through education does not necessarily predict safer sexual practices in youth. This observation,
suggests that the influence of educational attainment on the odds of sexual risk-taking in young people is moderated by other constructs. These constructs maybe individual, family or community based. The extent of the influence of educational attainment on sexual risk-taking in young people strongly hinges on what educational attainment “means” for young people, which is usually a reflection of the context in which they live.

Gutpa and Mahy (2003) explain that the observed decrease in the odds of sexual risk-taking with increase in educational level in young girls can be attributed to the fact that with more education, young girls are empowered to protect themselves against undesirable health outcomes such as: pregnancy and infection with sexually transmitted diseases. More exposure to education also affords them the ability to appreciate the many health and economic benefits of female empowerment, which includes exercising more power over their reproductive health. They opine that since the school environment provides opportunities for sexual socialization, young boys who attend school may have more opportunities to meet members of the opposite sex than their counterparts who have no education. This explanation supports the suggestion made earlier about the correlation between educational attainment and contextual factors.

Another socio-demographic variable that is significantly correlated with sexual risk-taking in young people is socio-economic status. Indices of socio-economic status also provide information about the context in which people exist. In some of the studies socio-economic status was assessed using an index measuring the household standard of living. Similar to the findings on the influence of age and educational attainment on sexual risk-taking, there was no general consensus on the influence of socio-economic
status on sexual risk behaviors of youth. Most of the studies that examined the influence of this variable revealed that low socio-economic status predisposed sexual risk-taking in young people (Rwenge, 2000; Meekers et al., 2003; and Kiragu and Zabin, 1995).

Djamba (2003) however, found an inverse association between socio-economic status and sexual-risk taking. In his study on the influence of social capital on the pre-marital sexual activity of women aged 14-24 in Kinshasa, Democratic Republic of Congo, he found that young women who belong to economically privileged families were more likely to engage in pre-marital sex. This finding is considered atypical. The prevalence of pre-marital sexual activity among young people especially women in communities in sub-Saharan Africa has been linked to poverty. A considerable number of young women concede that they had to indulge in unsafe sexual practices because of the need to obtain funds to pay their school fees. There is increasing evidence that many young women are virtually forced into menial jobs like prostitution because of financial needs, which their respective families are unable to meet. The finding from the study in Kinshasa, therefore, provides new evidence about the association between socio-economic status and sexual risk-taking in young people. Because there is no standard method for the measurement or assessment of socio-economic status, researchers determine levels of socio-economic status based on government set levels (which varies from country to country), the perception of wealth in the communities they study, their own judgment or other factors. This makes the objective interpretation of findings that examine the influence of socio-economic status on sexual risk-taking in young people somewhat daunting. Unlike the research findings on the association between age, educational level and socio-economic status, there was a general consensus regarding
the association between residence type and sexual risk-taking. Rural residence was generally identified with likelihood of sexual risk-taking. Young people living in rural areas are more likely to be sexually active (Gupta and Mahy, 2003; Kiragu and Zabin, 1993), and have multiple sexual partners (Karim, 2003), than their counterparts residing in urban areas. Poverty, illiteracy, limited access to health care facilities, and limited access to HIV/AIDS and sexuality education operate as important factors that predispose young people to sexual risk-taking in many rural communities.

Ethnicity appeared as a significant factor in sexual risk-taking. Sexual risk-taking among young people was found to differ by ethnicity in Ghana (Karim et al., 2003) The Gambia (Kane et al., 1993), Kenya (Mensch, 2001) and Cameroon (Rwenge, 2000).

Mensch et al. (2001) found out that in Kenya adolescent Kalenjin girls were more likely to commence sexual activity prior to marriage than girls from the Kikuyu tribe. Males from the Ewe tribe in Ghana had a greater likelihood of having had sex with multiple partners a few months before they participated in the study (Karim, 2003).

The variation of sexual risk-taking by religious affiliation was examined in a number of studies, however, only one study recorded significant associations. Takyi (2003) used the Ghana Demographic and Health Survey conducted in 1998 to examine the association between religion and women’s health in Ghana. Findings from his study showed that women who identified themselves as Christians (this includes Catholics, Protestants, and Christians of other sects) were more likely to report low HIV/AIDS risk than their counterparts who identified themselves as Muslims or followers of the African traditional religious beliefs. Africans usually identify themselves either by their
ethnicity or religious affiliation. Social relations and behavioral patterns are influenced by ethnic and religious tenets to some extent. Conservative ethnic and religious tenets are associated with less sexual permissiveness and vice versa. It is however, difficult to delineate the exact influence of ethnic and religious beliefs on sexual behavior, because the influence of both factors on behavior is largely moderated by other risk factors.

Knowledge and Perception of HIV/AIDS Risk and Contraceptives

The majority of studies that have examined the influence of HIV/AIDS or contraceptive knowledge and perception of risk on sexual risk-taking in youth reveal that young people who have greater HIV/AIDS knowledge, greater perception of HIV/AIDS risk and better attitudes about contraceptives are more likely to have safer sexual behaviors (Kiragu and Zabin, 1995; Simbayi et al., 2005; Adih and Alexander, 1999; Slonim-Nevo and Mukuka, 2005; Betts et al., 2003; Speizer et al., 2002; Lahai-Momoh and Ross, 1997 and Mbago and Sichona, 2003).

In his study on the risk factors of HIV/AIDS among youth in Cape Town, South Africa, Simbayi et al. (2005) found that lower HIV/AIDS knowledge, perceptions that condoms get in the way of sex, and the perception that condoms are disliked by partners were significantly associated with HIV risk index scores (index scores include different types of sexual risk behaviors) among males. Low knowledge about AIDS, lower self efficacy regarding prevention of AIDS and negative attitudes towards AIDS prevention were significantly associated with high-risk sexual behaviors among adolescents in Zambia (Slonim-Nevo and Mukuka, 2005). Adih and Alexander (1999) found that young men in Ghana who perceived a high level of susceptibility to the HIV infection
were approximately six times more likely to have used condoms during their last sexual encounter. Only one study found contrary results, Kiragu and Zabin (1995) found that female high school students in Kenya who had greater knowledge of contraceptives were less likely to have used any contraceptive during their last sexual encounter. They explain that this can be attributed to the widespread misconceptions about the side effects of contraceptives.

Individual perceptions and attitudes towards pre-marital sex were also found to be important predictors of sexual behavior. Kiragu and Zabin (1993) found that male and female adolescents in Kenya who disapprove of pre-marital sex were less likely to be sexually active compared to others who approved of sex before marriage. These findings are mostly in line with general assumptions. They provide further theoretical support for the proliferation of HIV/AIDS intervention programs focused on educating young people about the HIV/AIDS epidemic in sub-Saharan Africa.

**Extra-Familial Factors**

Extra-familial factors refer to environmentally based or contextual constructs that influence aspects of human behavior. Extra-familial factors that have been identified as important predictors of sexual risk-taking in young people in communities in sub-Saharan Africa are: socialization patterns and socio-cultural practices.

Studies reveal that young people’s interaction with their peers, adults and the community in which they live significantly influences their likelihood of indulgence in sexual risk behaviors. Negative peer influence is correlated with the likelihood of indulgence in risk behaviors (Twa-Twa, 1997; Karim *et al.*, 2003 and Karigu and Zabin,
1993 and Djamba, 2003). Twa-Twa (1997) found that the number of alcohol drinking friends was one of the strongest predictors of ever having sex and having multiple sexual partners in students in Tororo and Pallisa districts in Uganda.

In Ghana, young people who perceived their friends as being sexually active were more likely to be sexually active themselves (Karim et al., 2003). Young men in Kenya who interacted more with friends of both sexes who were not sexually active were only 15% as likely as their colleagues to be sexually active (Karigu and Zabin, 1993). Although the effects of negative peer influence on the sexual behavior of young people is strong it is noteworthy to mention that other factors like cultural belief systems and practices also determine sexual socialization among young people in communities in sub-Saharan Africa.

In many communities (rural communities particularly) in sub-Saharan Africa, general social (including sexual socialization), political, and economic relations are influenced by cultural norms. Unfortunately, cultural practices indigenous to communities in sub-Saharan Africa that were practiced before the advent of HIV/AIDS have become increasingly instrumental in the spread of HIV/AIDS. Although cultural practices vary between ethnic groups and between countries, certain cultural factors common to many communities have been implicated in the spread of the HIV/AIDS epidemic. The practices include: polygamy, wife sharing, pre and post marital sexual relations, female circumcision, marriage related practices like levirate and soroate (wife inheritance), social inequality, ritual sacrification, stigmatization and denial of HIV/AIDS, and the absence of male circumcision (Caldwell et al., 1993; Hrdy, 1987; Moses, 1990 and Buve et al., 2002).
Other cultural norms and practices such as the subordinate position of women (Buve et al., 2002), high value placed on children, the desire for male children, (Odebiyi, 1991) the practice of dry sex, postpartum and other abstinence practices, (Cohen and Trusell, 1996), young age at marriage, arranged marriages and blood pacts (Benoit, 2001) have all contributed to the spread of HIV/AIDS in this region. Very few studies have examined the influence of cultural practices and norms on the sexual socialization of young people in sub-Saharan Africa. Findings from the only study on the influence of socio-cultural factors on sexual risk-taking identified in this review corroborate speculation about the influence of cultural practices on the sexual behavior of young people.

Djamba’s (2003) extensive study on social capital and pre-marital sexual activity among young women in Kinshasa, Democratic Republic of Congo showed that women from patrilineal societies, regardless of their ethnic and socio-demographic characteristics were less likely to have pre-marital sex compared to their counterparts from matrilineal societies. Anthropologists have suggested that matricentered societies are more sexually permissive, while pre-marital sexual behaviors are strictly sanctioned in patricentered societies (Djamba, 2003). These kinship systems established in pre-colonial times, have gradually become less prominent over time. This study, however, provides evidence that such cultural systems and norms still influence the sexual behaviors of young people significantly.
While progress has been made in identifying the correlates of sexual risk-taking in youth in sub-Saharan Africa, a number of limitations exist within the literature that hinder understanding and explanation of the ecology of sexual risk-taking in young people in this region. Findings from these studies provide ample evidence on the influence of socio-demographic factors and HIV/AIDS knowledge on sexual preferences of young people, however very little is known about the influence of extra-familial factors on sexual risk-taking. More in-depth investigation into the influence of extra-familial factors, particularly socio-cultural practices and norms, is therefore necessary. Although there are well-founded speculations that socio-cultural practices influence the sexual behaviors of young people in sub-Saharan Africa, very few studies have examined these speculations scientifically and empirically.

An important socio-cultural norm that deserves attention is the influence of culturally perceived gender roles on intimate partner relationships. There is evidence that gender role perceptions contribute to increasing the vulnerability of young women to sexual risk-taking. Issues regarding intimate partner violence have been studied among married cohorts. However, little attention if any has been directed towards examining the influence of these norms on the sexual behavior of young people. Another type of extra-familial factor that has not been examined is the influence of young people’s economic activities on their sexual health. A large proportion of young people in sub-Saharan Africa are not enrolled in school. Many are employed in various professions and vocations. Virtually no information exists on the relationship between occupation types and sexual behavioral patterns. In attempt to provide a more comprehensive account of the correlates of sexual behavior among young people,
investigation into the sociological dynamics of the working adolescent is considered necessary.

This study will explore the influence of selected correlates of sexual risk-taking on the sexual behavior of unmarried women aged 15-24 in Nigeria. In addition to examining the association between socio-demographic factors and sexual risk behaviors, this study will examine the relative influence of HIV/AIDS knowledge and indices of female empowerment on the sexual behavior of the women. Unlike previous studies, this study will examine the influence of a socio-cultural norm – perception of intimate partner violence on sexual risk behavior. The association between the sexual behaviors of the women and a socio-environmental indicator, occupation type, will also be explored. The following section discusses findings from studies on the sexual behavior of young people in Nigeria. Findings from studies pertaining to the correlates of sexual risk-taking are subsequently discussed.

1.4.2 Sexual Behavior of Young People in Nigeria

In pre-colonial Nigerian societies, sexual behaviors were strictly governed by cultural values. These values dictated sexual relations between the sexes until the early part of this century. Norms and values pertaining to sexual relations were characteristically conservative and sometimes shaped by local religious belief systems. Pre-marital sexual relations were prohibited, and in certain cases punished. Marital infidelity was also shunned. Young women were not only expected to be virgins but their sexual status was also inspected and confirmed at the time of marriage. Cultural practices like the betrothal of newborn female children to future spouses at the time of
birth, female circumcision, the practice of arranged marriage and certain womanhood initiation ceremonies supported these values. Traditional requirements such as the disclosure of the sexual status of a new bride after the wedding night and the giving of gifts to the parents of a new bride who was found to be a virgin also helped reinforce sexual chastity before marriage.

In the Yoruba society (located in the western part of Nigeria), it was believed that a woman who was a virgin at the time of marriage became pregnant immediately after her wedding. Moral chastity was therefore, not only desired and preserved by young women for its social and material benefits but also for biological and parity rewards (Renne, 1993). In traditional Nigerian Igbo societies, “virginity of the bride was taken for granted” (Feyisetan and Pebly, 1989, p.344). One of the customs performed during marriage ceremonies in this tribe required a bride to disclose in the presence of a religious idol and her in-laws the name of any man with whom she had had sexual relations since she was betrothed to her husband (Feyisetan and Pebly, 1989).

In the Fulani society, the virginity of a new bride was confirmed the first night she had sexual relations with her husband. “A white cloth was spread on the bed on that night. The sheet was examined for streaks of blood in the morning, if they were seen; the cloth was handed round for inspection. The fact was usually celebrated by a feast” (Feyisetan and Pebly, 1989, p. 344). In the Hausa society, traditionally, after a husband spends the first night with his bride and confirms that she is a virgin, he sends gifts of kolanut and money to the bride’s parents. If she wasn’t a virgin he sends nothing (Feyisetan and Pebly, 1989).
These are a few of the many customary practices that determined sexual socialization in traditional Nigerian societies prior to the coming of missionaries and colonialists in the fifteenth century. Many cultural practices in these societies including those described above gradually changed as communities became exposed to western civilization introduced by missionaries and colonialists. Cultural practices pertaining to marriage have continued to undergo change. Today many of them are no longer practiced, and in communities where they are, rules governing them are no longer strictly enforced.

Studies on the sexual behavior of young people in Nigeria prior to and after Nigeria attained independence in 1960 are rare. The earliest study identified by this review was conducted in 1979. Following is a discussion of findings from the studies conducted after 1970. In an attempt to determine the impact of adolescent induced abortion, Omu et al. (1981) reviewed all available records of adolescent girls admitted to the gynecology ward at the University of Benin Teaching Hospital between January 1, 1974 and December 31, 1979. Their study revealed that 60.8% of all the patients with induced abortions were adolescents. The majority (71.7%) of these adolescents were primary and secondary school students. The youngest was 12 years old. In another study conducted in an undisclosed university located in a semi urban community, 83.4% of the male respondents and 56.1% of the female respondents who were single acknowledged they had had premarital sexual relations (Soyinka, 1979). Only 14.2% and 8.4% of males and females who were married had sexual intercourse before marriage. These findings reveal that a relatively high number of young people were sexually active in the early 1970’s.
The discovery of crude oil in parts of Nigeria in the early 1970s led to rapid development and transformation of many urban areas in the country. Economic and social transformation that took place in Nigerian societies around this time may have stimulated the exchange and adoption of western-style sexual behaviors. Another important development that took place around this time was the return of Nigerian professionals who fled the country during the civil war, which took place from 1967-1970. Many Nigerians who left the country for further studies also returned due to the country's promising economy. Liberal sexual values may have also been introduced into communities through these citizens who had spent time outside the country. A major development that has influenced sexual behavior of women throughout the world also took place around this time. The passing of Rowe v. Wade in 1969 in the United States of America meant that women could exercise more power over their sexual and reproductive health. Sonyinka (1979) explains that the availability of contraceptives at that time may have led to the increase of pre-marital sexual activity in communities in the country.

Similar patterns of sexual behaviors were documented from studies carried out in the 1980s. A study carried out in three of the major hospitals in Benin City, revealed that that 97 (86.4%) of the schoolgirls studied had their first pregnancy between 15-19 years, while 19 (14.9%) were between ages 20-24 (Oronsaye et al., 1982). The majority of these women were in their initial years in secondary school and 28.3% of the young women had experienced previous pregnancies.
In an attempt to determine sexual activities among school going adolescents, Owuamanam (1982) surveyed 14-19 year olds in eight different high schools in Osogbo, Ife and Ilesha areas of Oyo state. His study disclosed that 68.3% of male students and 42.5% of their female counterparts had had sexual intercourse. Three quarters (73.3%) of the boys about half (49.2%) of the girls had engaged in breast and genital fondling, while 80% of the boys and 53.3% of the girls had been involved in kissing.

Nichols et al. (1986) found that over 90% of those out of school and 59.9% of male and 38.4% of female secondary school adolescents aged 14-25 years living in Ibadan in 1982 were sexually active. This study also disclosed that 53.7% of male university students and 23.3% of female university students thought it was okay to have pre-marital sex at any time, while more than three quarters (81.7%) of the males and 89% of females who were not enrolled in school approved of pre-marital sex only if the people involved were engaged. About thirty-five percent of the women seeking abortion in Zaria between October and December 1985 were below the age of 20, 57% were students and 63% of them had had sexual intercourse before the age of 18 (Ujah, 1991). Two major reasons given for termination of pregnancies were “still in school” and “not married” (p.73). A large study conducted among young persons aged 12-24 in 1988 in five of the most modernizing cities (metropolitan Lagos, Enugu, Onitsha, Kaduna and Zaria) disclosed that 72% of the males and 82% of females who had had sexual coitus had it at the end of their teenage years (Makinwa-Adebusoye, 1992). Approximately 75% and 82% of sexually active males and females respectively acknowledging they had intercourse one or more times in the last month.
Investigation and documentation of sexual behavior of young people in Nigeria increased comparatively in the 1990s. Studies found similar sexual activity rates in young people identified in the previous decade. In his study on the correlates of premarital sexuality in Nigeria using the first Nigeria Demographic and Health Survey carried out in 1990, Isiugo-Abanihe (1994) identified that 38% of female adolescents and young adults were sexually experienced. Oloko and Omoboye (1993) found that about 50% of the 250 secondary school students they surveyed in five different schools in Lagos were sexually active. A study investigating reproductive tract infections and abortion in unmarried adolescent girls in a rural community in Rivers State revealed that 43.6% of adolescents less than 17 years old and 80.1% of those between the ages of 17-19 years were sexually active (Brabin et al., 1995). Another study conducted among secondary school students in two southeastern states showed that 40% were sexually active (Amazigo et al., 1997). More than 77% of adolescent girls aged 13-18 years surveyed in selected secondary schools in Benin City indicated they were sexually active (Unuigbe and Ogbeide, 1999).

Sexual behavioral patterns did not change significantly at the turn of the 21st century. Almost all studies conducted by researchers show similar rates of sexual involvement among youth. In their study investigating the reproductive health needs of persons in markets and motor parks in South West Nigeria, Dare et al. (2001) found that levels of sexual involvement of both men and women were high, 80% of men and 66% of women were sexually experienced.

Oladepo (2000) found that 19.9% of males in selected secondary schools in rural and urban areas of Oyo State were sexually experienced. A study investigating sexual
activities, beliefs, perceptions and experience of adolescents from different ethnic
groups in Niger State revealed that 32.7% had had sexual intercourse (Sunmola et al.,
2004). In their study on female sexual behavior in Calabar, Etuk et al. (2004) found that
approximately one third (37.4%) of senior secondary school female adolescents in
Calabar indicated they had had sexual intercourse.

These findings show that sexual activity among youth in Nigerian communities
is widespread. Although the majority of the young people become sexually active
during adolescence, results indicate that sexual initiation and activity varies by age.

**Age at first sexual encounter**

The studies in the previous section indicate that young people become sexually
active in their pre teens, between ages 9-12 years (Sunmola et al., 2004; Dare et al.,
2001; Etuk et al., 2004 and Oladepo, 2000). A number of adolescents acknowledged
they had their first sexual experience as early as seven and eight years of age (Obuagu
and Charles, 1993). In Oloko and Omoboye’s (1993) study, 3.6% of the respondents
indicated that they had sex when they were about 10 years old. Average ages at first
sexual intercourse of 13.5 and 13.7 were recorded in two other studies (Etuk et al., 2004
and Oladepo, 2000).

Age at first sexual intercourse was not clearly stated in a number of studies;
however, a general consensus in all research findings is that sexual activity increases
with age. Soyinka (1979) in his study on sexual behavior of university students found
that 14.3% of the sexually active students had their first sexual experience before they
turned 16; 18.5% had it between the ages of 16-21 while 53.9% experienced it between
ages 22-27. Adebusoye-Makinwa (1992) found that sexual activity increased steadily with age. A study by Brabin et al. (1995) revealed that 43.6% of adolescents less than 17 and 80.1% of those from 17-19 years were sexually active. Only one study presented a varying pattern of age at sexual initiation. The study conducted among adolescents from different ethnic groups in Niger state revealed that the majority (65.6%) of the respondents between ages 13-16 were sexually active, compared to 15.3% and 1.5% of those aged 17-20 and 21-25 respectively.

The relationship between age and sexual activity also varies by gender. There was however, no general consensus on which gender experienced sexual intercourse at a younger age. Sonyinka’s (1979) study revealed that more females (28.7%) had sex before age 16; however, between ages 16-21 more males (22.8%) were sexually active compared to 9.7% of their female counterparts. In the study conducted in different metropolitan cities, Adebusoye-Makinwa (1992) discovered that more women between ages 12 to 17 were sexually active compared to the males in the same study. Sunmola et al. (2004) also found that more females (42.2%) aged 11-13 were sexually active compared to their male (16%) counterparts.

Findings from other studies provide contrary results. Obuagu and Charles (1993) found out that 9.1% of males vs. 0.0% of females in Calabar became sexually active between ages 9-11. More males (16.0% v. 12.7%) became sexually active between ages 12-14, while more females (36.9%) than males (27.9%) became sexually active between ages 15-17. Adegbola and Babatola (1999) also found that males began sexual activity about one year younger than their female counterparts. Similar findings were also documented from a study conducted among young persons in markets and motor parks.
in South West Nigeria. Dare et al. (2001) found out that more males in all age groups began sexual activity before age twelve.

Results from these studies show that young people in many Nigerian communities become sexually active at a very young age. Many of these adolescents continue to be sexually active into adulthood. This pattern of sexual activity raises questions about the number of sexual partners they have throughout their lifetime.

**Number of Sexual Partners**

Studies show that a large proportion of Nigerian youth have sex with more than one partner prior to marriage. Soyinka (1979) recorded that (22.2%) of those below 16 years had more than 2 sexual partners within the same time period. Overall more males than females (12.3% v. 2.1%) had more than 2 sexual partners within six months prior to the study. In the study by Orubuloye et al. (1991) 31% of males and 13% of females living in the rural parts of Ekiti State acknowledged having 10 or more partners prior to their first marriage (Orubuloye et al., 1991). A study carried out among adolescents in an undisclosed college revealed that 68.8% of the sexually active male respondents had multiple sexual partners compared to 14.9% of females in the same study (Araoye and Fakeye, 1998). Another study carried out among undergraduates in a university indicated that 60.3% of the respondents aged 16-25 years had more than two sexual partners (Arowojolu et al., 2002). Findings from the study carried out among young people in markets and motor parks in Southwestern Nigeria revealed that 18.6% of the males aged 18-19 had three or more regular sexual partners, while only 2.4% of females within the same age bracket had a similar number of regular sexual partners. A
significant number (25.0%) of males aged 20-21 had more than three regular partners. Most of the women who were sexually active had only one regular partner (Dare et al., 2001). More males also acknowledged having more than one sexual partner in a study conducted among teens from different ethnic groups (Sunmola et al., 2004).

These statistics clearly reveal that adolescent males have more sexual partners than females at any time. The number of sexual partners among males in all age groups was also higher than females. Sexual experimentation by males in adolescence and in young adulthood is tolerated in some Nigerian societies. This is not the case for young women. Young women are usually held to stricter standards. Pre-marital sexual activity with multiple sexual partners has been partly blamed for increasing the risk of sexually transmitted diseases especially HIV/AIDS in young people in most communities in Africa. The risk of contracting HIV/AIDS is further heightened because many young people do not use condoms. Studies conducted in different parts of Africa reveal that a wide gap still exits between the knowledge of condoms and use among youth in Africa. The next section documents contraceptive awareness and condom use among adolescents in Nigeria.

**Condom Use and Contraceptive Knowledge**

A general consensus from investigations on the knowledge and use of contraceptives in youth in Nigeria is that relatively high proportions of young people know about contraceptives and approve of their use (Soyinka, 1979; Ujah, 1991; Adebusoye-Makinwa, 1992; Araoye and Fakeye, 1998; Arowojolu, 2002; Olaseha, 2004 and Oye-Adeniran, 2005). Condoms and pills are the most widely known and
most popular options (Adebusoye-Makinwa, 1992; Oladepo, 1996; Dare et al., 2001; Arowojolu, 2002; Olaseha, 2004; Sunmola et al., 2004 and Oye-Adeniran, 2005). However, there is a wide gap between the knowledge of contraceptives and their use (Soyinka, 1979; Odimegwu et al., 2002 and Sunmola et al., 2004). As few as 11.1% of respondents in one study used contraceptives compared to 54.7% who knew about them (Oye-Adeniran, 2005). A high proportion of respondents in most of these studies had never used any type of contraceptive 37% (Soyinka, 1979); 71% (Olaseha, 2004). and 38.1% (Arowojolu, 2002). University students were more likely to report ever using condoms (Nichols, 1986 and Araoye and Fakeye, 1998). As many as 72% of males and 81% of females in one higher institution acknowledged ever using a means of contraception (Araoye and Fakeye, 1998). More youth in the urban areas used condoms compared to those residing in the rural areas (Owuamanam, 1995).

Some respondents acknowledged using alternative, mostly non-conventional, contraceptive methods (Amazigo et al., 1997; Temin et al., 1999 and Alubo, 2001). In his study on adolescent reproductive health practices in four tertiary institutions in the city of Jos, Alubo (2001) found that in addition to conventional contraceptive options, adolescents made use of a broad range of home/personal remedies, treatment regimens from chemists, folk practices, and methods suggested by their peers for preventing pregnancy, preventing and treating STDs and resolving unwanted pregnancies. Respondents disclosed that in addition to conventional contraceptives such as condoms, withdrawal, abstinence, IUD, and pills (Depo Provera and Mestrogen), they used other substances and drugs like paracetamol, lemon mixed with salt, salt and sugar, potash and water, hot stout (beer), bitter lemon, Andrew’s liver salt, gin or whisky, Ampliclox,
Barium foxide, roots like gagi (an aphrodisiac), and the steaming of the vagina in alum and hot water for preventing pregnancy. They also acknowledged using drugs like prophylactic antibiotics, Ampicilin, Ampiclox, Colaxacillin, and Tetracycline for preventing sexually transmitted diseases. Other methods like sticking to one partner, condoms, and urination after sexual intercourse were also used. Some of these drugs and regimens were taken before or after sexual intercourse.

These findings suggest that sexually active adolescents in Nigeria make use of a wide range of crude and harmful non-conventional contraceptive methods. These practices should be discouraged. The detrimental effects of these practices should be included in sexuality messages and HIV/AIDS education materials communicated to youth.

**HIV/AIDS Awareness**

Studies on HIV/AIDS awareness in Nigeria began in the late 1980s. The majority have focused on investigating the levels of HIV/AIDS awareness in different populations and communities. A vast majority of the youth surveyed in the different studies indicated they had heard of the HIV/AIDS infection (Asindi *et al*., 1992; Edem, 1993; Asuzu, 1994; Temin *et al*., 1999; Dare *et al*., 2001; Fawole *et al*., 1999; Nwokocha *et al*., 2002; Arowojolu, 2002; Obiechina, 2001; Smith, 2004 and Aomreore *et al*., 2004). Ninety-five percent of adolescent girls surveyed in Benin City in 1999 had heard of the disease (Unuigbe and Ogbeide, 1999). Almost one hundred percent (99.1% and 99.5%) of respondents surveyed in two Nigerian cities knew of the disease (Smith, 2004). Results from the National Demographic and Health survey conducted in 1999
among approximately 11,300 men and women in the country revealed that 93.8% of young men aged 20-24 and 85% of those aged 15-19 had heard of HIV/AIDS. The same study also revealed that 76.6% of young women aged 20-24 and 74.2% of those aged 15-19 had ever heard of HIV/AIDS (National Population Commission, 1999). Results from these studies however reveal that majority of the youths surveyed have insufficient knowledge of how the disease is prevented or transmitted (Odujinrin and Akinkuade, 1991; Edem, 1993; Akande, 1994; Dare et al., 2001; Arowojolu, 2002; Asuzu, 1994; Nwokocha et al., 2002 and Olaseha, 2004).

Only 23.9% of the second year students surveyed at the University of Uyo knew how HIV/AIDS could be prevented compared to 49.45% who reported knowing of the disease (Edem, 1993). Although 85.3% of the adolescents surveyed in a study carried out in Ibadan had heard of HIV/AIDS only 6.8% knew the disease agent of AIDS (Asuzu, 1994). Despite the fact that 95% of the adolescent girls surveyed in Benin City had heard about AIDS, 40.7% disclosed they had no idea what the causative agent was. Approximately 10% of them thought HIV/AIDS was caused by the wrath of the gods (Asuzu, 1993). Sharing personal belongings with someone who has HIV/AIDS (30.81%), touching someone who has HIV/AIDS (10.60%), and hand shaking were identified by some respondents as possible routes of transmission of the infection (Asindi et al., 1992; Asuzu, 1994 and Nwokocha et al., 2002). Exercising regularly (88.89%) (Nwokocha et al., 2002) and avoiding public toilets (64%) were also mentioned as ways to prevent HIV/AIDS (Dare et al., 2001).
These results suggest that although levels of HIV/AIDS awareness are high, misconceptions on the modes of transmission and prevention of the disease abound. These misconceptions have been fueled by gross misinformation on the epidemiology of the disease. Increases in the death toll, and casualty rates of HIV/AIDS in the country have largely informed the general public of the presence of the disease; however, the stigmatization attached to HIV/AIDS makes it difficult for people to know its epidemiology as the conditions surrounding the death of victims are not discussed openly. This has led to an overall low risk perception of HIV/AIDS in the general public (NDHS 1999).

Attitudes to Sexual Behavior

Research reveals varied attitudes towards pre-marital chastity, contraceptive use and the HIV/AIDS infection. Only two studies documented attitudes towards pre-marital sexual relations. In one of the studies, 54.4% of the respondents (Lagos State adolescent Yoruba students) agreed that an unmarried boy or girl should not have a sexual partner, 32% thought otherwise (Oloko and Omoboye’s, 1993). When asked to state if their current sexual behavior was good or bad, 88.8% felt it was bad, while only 11.2% thought there was nothing wrong with their sexual behavior. In the second study, 43.6% of the respondents (adolescent youth in Ibadan) acknowledged that chastity was the surest way to prevent AIDS, 57.1% indicated they intended to practice chastity, however, 14.3% thought chastity was generally impossible and that the promotion of chastity to control AIDS is unreasonable. Only 8.3% acknowledged that chastity was difficult for them to practice (Asuzu, 1994).
Attitudes towards condom use were derisory. Many of the respondents in the different studies felt that condoms decreased sexual enjoyment (Araoye and Fakeye, 1998; Dare et al., 2001; Amazigo et al., 1997 and Temin et al., 1999). Fear that the condom will burst, “condoms waste time” lack of access to condoms, and religious beliefs were cited as reasons why young people didn’t like using condoms (Amazigo et al., 1997; Temin et al., 1999 and Araoye and Fakeye, 1998). In one study, respondents indicated mistrust in the type of condoms available in their communities. One respondent stated that “condoms are of different grades, those available in the Third World countries are of low quality, “sperm can penetrate through them” (Temin et al., 1999 p.189).

Risk perception of contracting HIV/AIDS was relatively low. Almost a hundred percent (95%) of respondents surveyed in markets and motor parks thought they were not at all likely to be infected (Dare et al., 2001). About half (40.98%) of high school students surveyed in Enugu felt they were less likely than most people to get AIDS (Nwokocha et al., 2002).

This review reveals that Nigerian adolescents are at high risk of contracting HIV/AIDS because of their indulgence in sexual risk behaviors. In an attempt to reverse this pattern and reduce their vulnerability to HIV/AIDS the factors that shape these behaviors need to be understood. The following section discusses findings from the studies carried out so far investigating the antecedents of these behaviors.
1.4.3 **Factors Associated with Sexual Risk-Taking in Young People in Nigeria**

Findings from the few studies that have examined the factors associated with sexual behavior among young people reveal similar patterns and trends identified in other countries in sub-Saharan Africa. Sexual behavior of young people in Nigeria is equally influenced by socio-demographic factors, HIV/AIDS related knowledge and extra-familial factors (Isiugo-Abanihe, 1994). Socio-demographic factors identified include: age, educational attainment, and residence type and ethnicity. As would be expected, a direct correlation was identified between age and sexual activity (Oladosu, 1993 and Oladepe, 2000). Precocious sexual activity was less common in rural areas (Oladosu, 2000 and Makinwa-Adebusoye, 1992). Oladepe (2000) found that adolescent males living in rural areas are more likely to be sexually active compared to their counterparts in the urban areas. The likelihood of indulging in risky sexual activity decreased with increase in educational level. Oladosu’s (1993) study revealed that the odds of contraceptive use in young women increased with increase in completed years of schooling. Makinwa-Adebusoye (1992) found that young people from the Igbo ethnic group were more likely to be sexually active compared to youth of other ethnic affiliations. Conservative attitudes towards pre-marital sexual activity were positively associated with precocious sexual behaviors. Sunmola *et al.*, (2003) found that adolescents in Niger state who had not had sexual intercourse supported pre-marital chastity. Two studies on the influence of socio-environmental factors: employment type and peer influence were identified. Eke (1997) found that the likelihood of sexual risk-taking in adolescents in the South Eastern part of Nigeria was associated with negative peer influence. Okonofua’s (1995) study indicated that young women involved in an
income-generating job were at higher risk of becoming pregnant than their counterparts. No study investigating the influence of HIV/AIDS related knowledge and socio-cultural norms or practices on sexual behavior of young people in the country was identified.

Based on this review, it is clear that very little is known about the factors that influence sexual behaviors of Nigerian youth. Without a good understanding of the factors that influence these behaviors, efforts to curb the spread of the epidemic will remain hampered. It is hoped that findings from this study will provide further insight and much needed information about the factors that shape sexual socialization of young people in Nigeria. The following chapter contains detailed information about the study area of this research. This background on Nigeria will lead to an understanding of the nature and extent of both the natural and man-made terrain in which the HIV/AIDS epidemic has been shaped in the country as well as the context in which the sexual behaviors of Nigerian youth are informed.
CHAPTER TWO

Study Area: Nigeria

This section focuses on the study area of this research. It presents a brief overview of the physical geography and human organization of Nigeria. The extent of the HIV/AIDS epidemic in the county is described and the nation’s response to it highlighted.

2.1 Overview of Nigeria

2.1.1 Physical Setting

The Federal Republic of Nigeria is located in the Western part of Africa. Bordered by Cameroon on the East, Benin on the West, Niger on the North and the Atlantic Ocean on the South, Nigeria serves as a connection between Central Africa and West Africa. Nigeria occupies a landmass of about 923,700 square km (356,668 miles) (Gale Research Group, 1998 and Haub, 2003). This land mass extends 650 miles North to South and more than 750 miles East to West (Perkins and Stermbridge, 1962 and Gale Research Group, 1998), making Nigeria the tenth largest country in Africa.

Nigeria’s topography is characterized by remarkable array of landforms and other physical features. These features are divided into six distinctive geographic
regions. Moving Northwards from the Atlantic Ocean, the coastal plains are adjacent to two highlands; the Yoruba land Plateau in the West and the Udi Hills in the East. These highlands rise to about 1,600ft and 1,000ft respectively above see level (Perkins and Stembridge, 1962). The Niger/Benue trough, home of the basins of the two major Rivers (River Niger and River Benue) borders this region. Next to this region is the North-Central Plateau. This region is generally high and is characterized by breathtaking features formed by the numerous rivers that take their sources from the highland. Two arid like plains border this region on both sides. The Cameroon highlands are located in the Eastern part of the country, on the border between Nigeria and Cameroon. This part of Nigeria is the home of the Sukur Cultural Landscape, one of the world heritage sites inscribed by the United Nations Educational, Scientific and Cultural Organization in 1999 (UNESCO, 2005).

Nigeria’s climate is characteristically tropical. Climatic conditions however, vary distinctly within the country. Average temperatures range from 31° in the South to about 34°C in the Northern parts of the country (Nelson, 1982). Amounts of rainfall received also vary, decreasing as one travels northwards where 500mm of rainfall have been recorded (Nelson, 1982). Nigeria is blessed with five different vegetation types, which are rich with natural resources.

Adjoining the Atlantic Ocean in the South is the mangrove swamp forest. Characterized by evergreen trees and shrubs arranged in a dense canopy in silt-rich brackish water Nigeria’s mangrove swamp forest is “the most extensive forest of this type in the world” (Perkins and Stembridge, 1962, p.53). The fresh water swamp forest borders this vegetation zone. Next to this swamp is the rainforest, characterized by
dense undergrowth. This forest provides the nation's population with numerous food and cash crops. The guinea savanna borders this zone. Characterized by grasslands and shrubs this region is the most extensive vegetation zone in the country. Finally, the Sudan savanna, an arid like vegetation adjourns the guinea savanna.

2.1.2 Political and Economic Organization

Nigeria is made up of 36 states and a Federal Capital Territory. Figure 2.1 shows a map of the country. These states are further divided into smaller administrative units called local government areas. There are currently 774 local government areas in the countries. The states are further grouped into six geo-political zones based on ethnic homogeneity and geographical proximity (Federal Ministry of Health, Nigeria, 2001). These zones are named: Southwest, Southeast, Northeast, Northwest, Central and South-South. Nigeria's government operates at three levels: the federal, state and local levels. After a protracted period of colonization, Nigeria obtained independence from British colonialists on October 1st 1960. After another protracted period of military rule in the country, democratic rule was ushered in 1999.

The World Bank classifies Nigeria as a low-income country. The country is ranked among the 13 poorest countries in the world. More than 50% of the nation's people live below the poverty level. Nigeria's economic woes began in the early 1980's after oil prices fell worldwide. Prior to this, the nation was a leading exporter of oil in Africa. The discovery of oil in Nigeria in the 1970s led to a major shift in the nation's economy. Since Nigeria depended solely on revenue received from the sale of oil products, there was nothing else to fall back on after oil prices fell. Structural
adjustment programs introduced in the mid 1980's and other reforms have helped put
the economy back on track again (Nwosu, 1991). Nigeria's economy still depends
largely on revenue received from the exportation of petroleum. Oil production accounts
for a large proportion of the nation's earnings. The nation still relies heavily on
agriculture. It remains the nation's major economic activity, serving as the major
employer of labor in the country. The economic situation in the country places the
nation's youth in a vulnerable position for adverse health problems. Because of the lack
of jobs, many young people are forced to engage in marginal economic activities to
survive. A large number of children are seen on Nigerian streets hawking to help make
ends meet in their homes. Some young women have resorted to prostitution to survive.
These activities increase the risk of HIV/AIDS infection in the nation's youth.
Figure 2.1: Map of Nigeria
2.1.3 Population and Demography

Nigeria has a population of about 137 million (World Bank Group, 2005) making it the most populated country in Africa and the eighth in the world. The country houses 6% of Africa’s population and is one of the most densely populated parts of the continent. Although the population growth rate decreased considerably within the last decade, the country still has a relatively high (2.5%) population growth rate (UNFPA, 2005). Nigeria’s population profile is similar to the profile of other developing countries. Almost half of the nation’s population is below 15 years of age (Population Reference Bureau, 2004). Table 1.2 presents the demographic indicators for the country. Similar to nations in the developing world, Nigeria has witnessed a rapid increase in the size of its urban population, a trend that has been identified as an important factor in increasing the risk of adverse health outcomes in young people (Blum and Nelson-Mmari, 2004).

Figures in the table also reveal that although literacy rates improved over ten years, a high proportion of the nation’s population is still illiterate. This situation is disturbing, because primary education is free and secondary education is highly subsidized by the federal government. It is also important to note that the illiteracy rate of women is almost twice that of men in the country. This is a reflection of a gender gap in the access to and participation in education in the country. Young girl’s participation in education is generally low especially in the northern states, where gender disparity in primary Gross Enrollment Ratio (GER) averaged over 30% in 2001 (Solarin, 2003 and UNESCO, 2004). According to the Millennium Development Goals (MDG) indicators,
71% of the 3.9 million primary school aged children who are out of school are girls (UNESCO, 2004).

This disparity in gender education prevented the nation from meeting the MDG for gender parity for 2005 (UNESCO, 2004). The Federal government has identified several factors that militate against gender parity in female enrollment, retention and achievement. These factors include: socio-cultural practices, poverty, some religious tenets, and institutional barriers (Solarin, 2003).

In an attempt to address this disparity, the Federal Government has produced a National Policy on Women. This policy includes laws for women and girl’s education. The government hopes to implement the following objectives under this provision: provide compulsory free primary and secondary for all children, enforce legal provision of penalties for withdrawing girls from school for marriage, enforce existing laws prohibiting child labor and street trading, enforce enrollment and retention of girls in school, make provisions for second chance education for girls and women, encourage enrollment of female students in science, mathematics and technology, and provide education and training for women with special needs (UNESCO, 2004). Among other problems, high illiteracy rates in young girls in the country, poses a challenge to the prevention of the HIV/AIDS epidemic in the country.
Table 2.1: Demographic Indicators for Nigeria

<table>
<thead>
<tr>
<th>Indicators</th>
<th>1990</th>
<th>Most Recent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>88,992,220</td>
<td>136.5 mill</td>
</tr>
<tr>
<td>Population Growth Rate (%)</td>
<td>3.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Proportion of Population 15-24</td>
<td>-</td>
<td>20.3</td>
</tr>
<tr>
<td>Life Expectancy at Birth (Years)</td>
<td>50.2</td>
<td>51.5</td>
</tr>
<tr>
<td>Fertility Rate, Total Birth per Woman</td>
<td>6.70</td>
<td>5.42</td>
</tr>
<tr>
<td>Population living below $1 a day</td>
<td>-</td>
<td>70.2</td>
</tr>
<tr>
<td>Mortality Rates, Infants (per, 1,000 live Births)</td>
<td>104.8</td>
<td>78.8</td>
</tr>
<tr>
<td>Mortality Rates, Under –5 (per, 1,000 Live Births)</td>
<td>64</td>
<td>133</td>
</tr>
<tr>
<td>Urban Population (% of total)</td>
<td>35</td>
<td>48.3</td>
</tr>
<tr>
<td>Illiteracy Rate, adult male (% of males above 15)</td>
<td>41</td>
<td>22</td>
</tr>
<tr>
<td>Illiteracy Rate, adult female (% of females above)</td>
<td>62</td>
<td>36</td>
</tr>
</tbody>
</table>

Sources: World Bank Group, World Development Indicators Database, 2005.

2.1.4 Religious, Ethnic and Linguistic Groups

Nigeria is remarkably diverse ethnically and culturally. The country is home to more than 250 different ethnic groups and more than 400 indigenous languages are spoken across these groups (Fernandez et al., 2000; Onigu, 1990 and Murrison, 2002). There are, however, three dominant ethnic groups and languages; they are Hausa, Yoruba and Igbo. These groups account for approximately 21%, 20% and 16.1% respectively of the population. Other relatively large ethnic groups include Fulani (12%), Kanuri (4.1%), Ibibio (3.6%), Tiv (2.5%) and Ijaw (2%). Figure 1.1 identifies the geographic location of the major ethnic groups in the country.

The nation’s population is almost split evenly by religious affiliation. It is estimated that half of the population are Muslims, while 40% are Christians. Followers of the African traditional beliefs make up the remaining 10% (Fernandez et al., 2000). The country has the highest number of Muslims (47,720,000) in Africa as well as the
highest number (16 million) of Roman Catholics in the continent (Nationmaster.com, 2005). Nigeria is also home to the second largest (17.5 million) Anglican community in the world (British Broadcasting Corporation, 2004).
Figure 2.2: Principal Ethno-Linguistic Groups in Nigeria
Data Source: Central Intelligence Agency, United States of America, 1979
2.1.5 **Health and Health Care Delivery**

Indictors presented in table 2.1 reveal that the health status of the nation’s population is poor. The HIV/AIDS epidemic can be blamed for reducing life expectancy by almost ten years within the last decade; however, it is important to mention that a large number of lives are lost from preventable and treatable infectious and chronic diseases every year. An important factor that can be held accountable for the state of the nation’s health status is the lack of medical personnel and access to health facilities. Statistics from the United Nation’s Population Fund (UNFPA) show that there are only 27 physicians per 100,000 people in the country and that only 42% of births (1995-2002 est.) in the country are attended by skilled attendants. The table also reveals that nearly half of the population does not have access to affordable essential drugs. The healthcare needs of the entire population are addressed through the health care delivery system.

Nigeria runs a three-tired health care delivery system, which breaks down as follows:

1. The primary health care sector – comprised of clinics and dispensaries;

2. The secondary health care sector – comprises maternal clinics and the health centers; and

3. The tertiary health care sector – comprises the general hospitals and the University teaching hospitals.

(National Population Commission, 2003)
Table 2.2: Estimates of Health Care Personnel & Government Expenditure

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Health Expenditure (% of GDP) 2001</td>
<td>0.8</td>
</tr>
<tr>
<td>Private Health Expenditure (% of GDP) 2001</td>
<td>2.6</td>
</tr>
<tr>
<td>Health Expenditure per capita (PPP US $) 2001</td>
<td>31</td>
</tr>
<tr>
<td>Births Attended by Skilled Health Personnel (%) 1995-2002</td>
<td>42</td>
</tr>
<tr>
<td>Physicians (per 100,000 people), 1990–2003</td>
<td>27</td>
</tr>
<tr>
<td>Population with Sustainable Access to Affordable Essential Drugs (%) 1999</td>
<td>0-49</td>
</tr>
</tbody>
</table>


Statistics from the National Demographic and Health Survey conducted in 1999 reveal that (81%) of the nation’s population resides within 10 km of these facilities. More households live close to health centers (68%) and clinics (54%) than to hospitals (45%) (National Population Commission, 1999). Overall access to health facilities, however, varies by region. These figures reveal that a considerable proportion of Nigeria’s population has inadequate access to healthcare facilities. Limited access to healthcare invariably affects the dissemination of health resources necessary for the disease prevention and health promotion such as contraceptives, health information and medical counseling.

UNFPA indicators of adolescent reproductive health reveal that a considerable number of young women aged 15-19 have children (Fertility rate per 1,000 women 15-20). This is partly because a large number marry early. The mean age at first marriage is 18.7, one of the lowest in sub-Saharan Africa. Child bearing, however, differs by location. More young women who reside in rural areas begin child bearing before their counterparts in the urban areas.
Young women who reside in rural areas are also more likely to have more children. Although more (15.7% vs 5.6%) women living in urban areas have more access to modern contraceptives, overall use of contraceptive among all women in the country is very low (United Nations Population Fund, 2003).

2.2 The HIV/AIDS Epidemic in Nigeria

2.2.1 Epidemiology

The first HIV/AIDS case in the country was identified in 1986. HIV/AIDS prevalence rates in the country increased from 1.4% in 1992 to 5.9% in 2001 (UNAIDS(e), 2004). The overall prevalence rate of the infection in the country fell to 5.4% in 2003 (UNAIDS(e), 2004). Although the HIV/AIDS rates recorded in Nigeria within the last decade are moderate compared to rates recorded in other sub-Saharan African countries, a large number of people are infected. Statistics show that “in 1998 alone, 1,500 Nigerians were infected with HIV everyday – more than one new infection per minute” (United States Agency for International Development (USAID) and Family Health International (FHI) 1999, p.1).

The HIV/AIDS epidemic became evident in the country less than a decade ago; however, today the Nigerian HIV epidemic has grown to become one of the largest epidemics in sub-Saharan Africa. The United Nations Joint Program on HIV/AIDS estimates that about 3.6 million people are infected with the virus (UNAIDS(e), 2004).
Nigeria has the second highest number of HIV/AIDS infected adults in sub-Saharan Africa and the third largest number of HIV patients in the world. Similar to patterns identified in other countries in sub-Saharan Africa, the Nigerian HIV epidemic affects women disproportionately. UNAIDS(e) (2004) estimates that 1.9 million women aged 15-49 were living with the infection at the end of 2003 in the country. This is roughly more than half of all those infected in the country. Children have not been left out of this epidemic; statistics indicate that almost 300 thousand children below age 15 were living with the infection at the end of 2003 (UNAIDS(e), 2004). Young people aged 15-24 have been most affected by the epidemic. Data reveals that more than 500 thousand women and more than 250 thousand men aged 15-24 were infected with the virus at the end of 2001 (Bankole et al., 2004).

The infection has also taken an extraordinary human toll in the country. More than half a million people have died of AIDS since it became evident in the country. Statistics show that 250,000 adults and children died of AIDS in the country in 1999 alone (USAID, 2002). UNAIDS estimates that 310,000 adults and children died of AIDS in 2003 (UNAIDS(e), 2004). As a result, many children have lost either one or both parents from the infection. Almost two million (1.8 million) children aged 0-14 years have been orphaned by the infection (UNAIDS(e), 2004).

Although these figures show that the epidemic has significantly affected the nation as a whole, there is evidence of internal variation in the intensity and impact of the epidemic. Findings from the sentinel survey conducted in the country indicate that the infection rates vary remarkably by state. In 1999, a prevalence rate of 16.9%, the highest rate was recorded in Benue State (located in the East Central Region), while a
rate of 1.7%, the lowest in the country was recorded in Jigawa State, which is located in the North East (Federal Ministry of Health, 1999).

A geographical analysis of the HIV/AIDS infection examining the pattern of the infection in the country revealed a marked regional difference in the distribution of HIV/AIDS prevalence rates in the country. Figures 2.3 and shows the pattern of the infection in 1999 and 2001. The observed pattern is characterized by a clustering of high HIV/AIDS rates in the North-Central and Southeast and relatively low rates in the Northern and Southwestern parts of the country. The hottest spot or epicenter of the epidemic, cuts across cultural, administrative, regional and environmental/physical boundaries. The pattern of the infection was also found to persist over time. A major implication of findings from this study is that the forces propelling the epidemic are not regionally, culturally or environmentally constrained (Obidoa, 2003).
Figure 2.3a: Pattern of HIV/AIDS Infection in 1999

Figure 2.3b: Pattern of HIV/AIDS Infection in 2001
2.2.2 HIV/AIDS Surveillance

In attempt to ascertain the magnitude of the HIV/AIDS epidemic the country, the Nigerian government established a sentinel surveillance system in 1990, a few years after the first HIV/AIDS case was reported in the country. The first HIV/AIDS surveillance was conducted in 1991.

Details of the survey are not available, however reports on other sentinel surveys indicate that it was carried out in nine states in the country. An overall prevalence rate of 1.4% was recorded (Federal Ministry of Health, 1995). The second survey was conducted in 1993/94. This survey was conducted in seventeen states and included 64 different sites. Five different groups were surveyed: antenatal clinic attendees, commercial sex workers, sexually transmitted disease patients, long distance truck drivers and tuberculosis patients. This survey revealed an average prevalence rate of 3.8% (Federal Ministry of Health, 1995). In 1995/96, a third sentinel survey conducted among the same risk groups in twenty states found an overall prevalence rate of 4.5% (Federal Ministry of Health, 1997).

Due to logistic and financial constraints a survey was not conducted in 1997/98 (Federal Ministry of Health, 1999). Subsequent surveys were carried in 1999, 2001 and 2003. These studies were conducted in all states; however, due to the redesigning of the surveillance system in 1999, only women attending antenatal clinics were surveyed in these subsequent studies. HIV/AIDS prevalence rates of 5.4%, 5.8% and 5.4% were recorded in 1999, 2001 and 2003 respectively (Federal Ministry of Health, 1999; 2001). Nigeria has a national HIV/AIDS case reporting system but due to the lack of appropriate HIV testing facilities, non-functional HIV/AIDS policies and because of the
stigmatization of the disease HIV/AIDS cases are reported passively in the country (Obidoa, 2003). Table 2.1 presents a summary of the sentinel surveillance and HIV/AIDS case reporting in the country.

Table 2.3: Summary of HIV/AIDS Surveillance in Nigeria

<table>
<thead>
<tr>
<th>Year</th>
<th># of States</th>
<th>Sample Size</th>
<th>Sample Pop</th>
<th># Positive</th>
<th>HIV/AIDS-Rate%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991/92</td>
<td>11</td>
<td>11,907</td>
<td>CSW, TB, ANC, STD</td>
<td>482</td>
<td>1.4</td>
</tr>
<tr>
<td>1993/94</td>
<td>16</td>
<td>22,589</td>
<td>CSW, TB, ANC, LDTD, STD</td>
<td>1,470</td>
<td>3.8</td>
</tr>
<tr>
<td>1995/96</td>
<td>17</td>
<td>23,401</td>
<td>CSW, TB, STD</td>
<td>2,133</td>
<td>4.5</td>
</tr>
<tr>
<td>1999</td>
<td>37</td>
<td>20,989</td>
<td>ANC</td>
<td>1,118</td>
<td>5.4</td>
</tr>
<tr>
<td>2000</td>
<td>12</td>
<td>4,948</td>
<td>STD and TB</td>
<td>798</td>
<td>17.0/11.5</td>
</tr>
<tr>
<td>2001</td>
<td>37</td>
<td>24,243</td>
<td>ANC</td>
<td>1,388</td>
<td>5.8</td>
</tr>
<tr>
<td>2003</td>
<td>37</td>
<td></td>
<td>ANC</td>
<td></td>
<td>5.4</td>
</tr>
</tbody>
</table>

HIV/AIDS CASE REPORTING

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>52</td>
<td>163</td>
<td>129</td>
<td>412</td>
<td>719</td>
<td>908</td>
<td>2,829</td>
<td>838</td>
<td>745</td>
</tr>
</tbody>
</table>

ANC - antenatal clinic attendees, CSW - commercial sex workers, TB - tuberculosis patients, STD - sexually transmitted disease patients, LDTD - long distance truck drivers

2.2.3 Response to the Epidemic

2.2.3.1 National Strategic Framework

Efforts towards combating the spread of the epidemic in the country began almost immediately after the first AIDS case was discovered in the country. In attempt to ascertain proper response to the epidemic, the government developed a three-year medium term plan in 1989. In 1992 after the National AIDS Prevention and Control Program was merged with the National Sexually Transmitted Disease program to form the National AIDS/STD Control Program, a second medium term plan was developed (Messersmith, 1994). Currently, Nigeria is working with a new strategic framework. This framework will guide all government intervention programs for the next four years 2005-2009. Details of this framework are as follows:

**Goal:** “To reduce HIV/AIDS incidence and prevalence, provide equitable prevention, care and support and mitigate its impact among women, children and other vulnerable groups and the general population in Nigeria by 25% by the year 2009” (National Action Committee on AIDS (NACA) Nigeria, 2005).

**Objectives:**

1. To improve co-ordination mechanisms and increase resource mobilization and effective utilization such that program implementation rate increases from 50% in 2005 to 95% in 2009 and resources mobilized increase mobilized increase by 50% in 2009;

2. To increase the percent of men and women, particularly youth who practice abstinence primarily and safe sex secondarily;

3. To increase access to comprehensive gender sensitive Care, Treatment and Support services for People living with HIV/AIDS and PABA by 50% in 2009;
4. To increase gender sensitive sectorial responses and mitigation of the impact of HIV/AIDS from 25% to 75% by 2009 and promote the integration of gender, human rights and HIV/AIDS into the activities of regional bodies;

5. To increase percent of special needs populations (sex workers, refugees, internal displaced people, trafficked humans, persons with disability, intravenous drug users and substance abusers, senior citizens, transport workers, migrant workers, prison inmates) and uniform personnel and spouses who practice safe sex;

6. To increase the number of gender sensitive and human rights friendly policies, legislations and the enforcement of laws that protect the rights of the general population; and


Major priority interventions under this framework include: women, youth, expansion of equitable access to ART, care of orphans and vulnerable children, high risk populations and blood safety. It is hoped that the appropriate implementation of this plan will lead to a significant reduction in the incidence and impact of the epidemic in the country.

2.3.2 National Policy on HIV/AIDS

The goal of the National HIV/AIDS policy is to “control the spread of HIV in Nigeria, to provide equitable care and support for those infected by HIV and to mitigate its impact to the point where it is no longer of public health, social and economic concern, such that all Nigerians will be able to achieve socially and economically productive lives free of the disease and its effects” (Federal Republic of Nigeria, 2003, p. XIV).

This policy focuses on five priority issues namely:

1. Prevention of HIV/AIDS
The policy on the prevention of HIV/AIDS in the country includes specific policies on the prevention of the infection in different populations. The government’s policy on adolescent and youth focused interventions states as follows: "the various governments of Nigeria will ensure the availability of youth friendly information and health services that are accessible and socially acceptable, providing services that will reduce the vulnerability of youth to HIV/AIDS" (Federal Republic of Nigeria, 2003, p.23).

The following activities will be carried out in support of this policy.

1. Review and modify national policies and programs with the view to reducing the vulnerability of young people to HIV/AIDS;
2. Ensure youth-friendly access to reproductive health services including STI management, HIV testing and counseling and the provision of advice and services to encourage safe sex;
3. Integrate HIV/AIDS education into the curricula of formal schools beginning at the primary level;
4. Produce and disseminate appropriate HIV-related IEC material targeted towards youth;
5. Develop HIV/AIDS peer education programs for in-school and out-of-school youth; and

Timely and adequate implementation of these objectives will certainly help avert the spread of the epidemic in the country. However for these objectives to be successfully
realized, there needs to be a good understanding of the factors that shape youth vulnerability to the HIV/AIDS infection. Because the infection is primarily transmitted heterosexually in Nigeria an in-depth understanding of the dynamics of youth sexual socialization is considered requisite. Making use of the only dataset that documents a broad range of reproductive health at the national level, this study will provide pertinent explanation about the factors that determine the sexual behavior of young unmarried women in Nigeria.
CHAPTER THREE
Data and Methods

3.1 Data

Data for this study was obtained from the National Demographic and Health Survey carried out in 2003. Details of this survey and the specific dataset are described.

3.1.1 National Demographic and Health Survey

The National Demographic and Health Survey (NDHS) is a data collection and analysis project initiated by the United States Agency for International Development to assist developing countries with the collection, monitoring and analysis of health related data on maternal and child health, HIV/AIDS and sexually transmitted infections, and reproductive health and nutrition. These surveys are coordinated by ORC Macro International in collaboration with national governments and other international agencies. The 2003 Nigerian NDHS was conducted by the National Population Commission in collaboration with other development partners namely, Department for International Development (DFID), the United Nations Population Fund (UNFPA), and the United Nations Children's Fund (UNICEF). ORC Macro international provided technical support through MEASURE DHS+.
This survey provides estimates for health indicators like fertility, contraceptive prevalence and use, child mortality, immunization levels, family planning, breastfeeding practices, child and maternal nutritional status, female circumcision, marriage and sexual activity, HIV/AIDS and STI awareness (National Population Commission, 2003). Information provided from these surveys is used for policy making and for designing strategies for improving health and family planning services.

**Survey Methodology and Sample Design**

The National Demographic and Health Survey is a nationally representative household survey of women aged 15-49. The survey is usually carried out in a four-step process. These are:

**Step one:** Preparatory activities, this involved the design and development of the survey instrument to meet specific host-country needs;

**Step two:** Data collection, this involved staff training and fieldwork

**Step three:** Data processing, which includes editing, coding, and data verification

**Step four:** Data analysis and report writing

The 2003 Nigerian NDHS survey sample was made up of 7,864 households, which were selected in two stages. The first stage involved the selection of 365 clusters from a list of enumeration areas (EA). The enumeration areas form the primary sampling unit for the NDHS surveys. The enumeration areas were created from the 1991 population census. Currently, there are a total of 212,079 enumerations units in the country. After the selection of the clusters, a list of all the households in each cluster
was made and households were then selected systematically for inclusion in the survey (National Population Commission, 2003). The 2003 NDHS survey included men aged 15-49; hence, three questionnaires were used for the 2003 survey: the women’s questionnaire, the household questionnaire and the men’s questionnaire. Information on the characteristics of the households dwelling units were collected from the household questionnaires. The questionnaires were translated into the three major languages: Hausa, Yoruba and Igbo, and pre-tested prior to administration. After the training of project staff, data collection (fieldwork) commenced; this lasted for five months.

Not all the households listed were found; out of the 7,864 households selected, 7,327 were found and 7,225 successfully interviewed. Despite this shortfall, a 99% household response rate was recorded. More than 90% of the 7,985 eligible women were interviewed. All the women between ages 15-49 who were either residents or visitors in the households the night prior to the interview were eligible to be interviewed (National Population Commission 2003). Table 3.1 shows the number of households, interviews, and response rates by residence.
Table 3.1: Number of Households and Individual Interviews and Response Rates

<table>
<thead>
<tr>
<th>Results</th>
<th>Residence</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Rural</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td><strong>Household Interviews</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household Selected</td>
<td>3,163</td>
<td>4,701</td>
<td>7,864</td>
<td></td>
</tr>
<tr>
<td>Households Occupied</td>
<td>2,979</td>
<td>4,348</td>
<td>7,327</td>
<td></td>
</tr>
<tr>
<td>Households Interviewed</td>
<td>2,931</td>
<td>4,294</td>
<td>7,225</td>
<td></td>
</tr>
<tr>
<td><strong>Household Response Rate</strong></td>
<td></td>
<td></td>
<td>98.4</td>
<td>98.8</td>
</tr>
<tr>
<td><strong>Interviews with Women</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Eligible Women</td>
<td>3,181</td>
<td>4,804</td>
<td>7,985</td>
<td></td>
</tr>
<tr>
<td>Number of Eligible Women Interviewed</td>
<td>3,057</td>
<td>4,563</td>
<td>7,620</td>
<td></td>
</tr>
<tr>
<td><strong>Eligible Women Response Rate</strong></td>
<td></td>
<td></td>
<td>96.1</td>
<td>95.0</td>
</tr>
<tr>
<td><strong>Interviews with Eligible Men</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Eligible Men</td>
<td>1,073</td>
<td>1,499</td>
<td>2,572</td>
<td></td>
</tr>
<tr>
<td>Number of Eligible Men Interviewed</td>
<td>986</td>
<td>1,360</td>
<td>2,346</td>
<td></td>
</tr>
<tr>
<td><strong>Eligible Men Response Rate</strong></td>
<td></td>
<td></td>
<td>91.9</td>
<td>90.7</td>
</tr>
</tbody>
</table>

Source: Adapted from the National Population Commission, National Demographic and Health Survey Report, 2003.

3.2 Research Framework

This study aims at understanding the factors associated with HIV/AIDS related sexual behavior in unmarried women aged 15-24 in Nigeria. To accomplish this, this study will examine the relationships between selected predictors of HIV/AIDS risk and the sexual behaviors of young women in Nigeria in a three-dimensional framework. Figure 3.1 illustrates this framework.
Figure 3.1: Research Framework

**Empowerment**
- Knows where to get a condom
- Knows where to get a female condom
- Perception of Intimate Partner Violence

**Demographics**
- Age
- Highest Educational Level
- Religion
- Material Standard of Living
- Residence Type
- Employment Type

**HIV/AIDS Awareness**
- AIDS Prevention Knowledge
- AIDS Transmission Knowledge
- AIDS Attitudes
- Sources of AIDS info
- Knows someone who has/had died of AIDS
- HIV/AIDS Risk Perception

**Sexual Risk Behaviors**
- Have had Sex
- Age at First Sex
- Condom Use at Last Sex
- Condom Use at First Sex
- Recent Sexual Activity
The proposed scenario in the research framework is that the sexual behaviors of young unmarried women in Nigeria are influenced by factors that can be categorized into three broad domains: socio-demographic characteristics, HIV/AIDS awareness, and female empowerment. This study also hypothesizes that these factors influence the likelihood of having had sex. Prior to the examination of the association between the independent variables and the dependent variables, the differences between the young women who have had sex and those who have not based on the independent variables will be examined. Detailed description and definition of variables in each of these domains are presented in the subsequent section.

3.2.1 Description and Definition of Domains

Socio-demographic factors refer to indicators that reflect the social context in which people live. They are usually indicators of social, economic, educational, and reproductive and health status. Prior literature highlights association between sexual risk behaviors and socio-demographic factors such as educational status and material standard of living. Sexual behaviors have also been found to differ by ethnicity, religious affiliation and residence type. This study will examine the relationships between some of the identified socio-demographic factors and sexual behaviors to determine if they also influence sexual behaviors of young unmarried women in Nigeria. Socio-demographic variables selected include: age, educational level, material standard of living, residence type, religion, and employment type. Employment type serves as: a socio-demographic factor as well as an indicator of socio-environmental
influence. A detailed description of the variables selected and the recoding process is presented below.

**Age:** the current age of the respondents. Respondents were aged 15 through 24. This variable was left as a continuous variable.

**Educational Level:** Respondents were asked to indicate the highest educational level they had attained. Four options were provided: no education, primary education, secondary education and higher education. Responses to these questions were coded as follows: no education, 0; primary education, 1; secondary education, 2; and higher education, 3. No recoding was done for this variable.

**Material Standard of living:** This was assessed through an index measuring household characteristics. The index measured whether the respondent lived in a household that had electricity, radio, television, refrigerator, bicycle, motorcycle and car/truck. The scale ranged from zero through seven, with a higher score indicating higher household economic status (Cronbach's alpha = 0.669).

**Residence Type:** Respondents indicated if they lived in an urban area or a rural area.

These variables were originally coded as follows: urban area, 2, rural area, 1.

**Employment Type:** Job types were grouped into three main groups:

a) Professional - includes the women who indicated they were in medical/nursing field or work as educators/statisticians, journalists/actors/athletes, clerical staff, managers, or in the legislative sector.

b) Vocational - includes women who work as sales assistants/street vendors, catering/cooks, housekeeping/maids, hairdressers/barbers and military personnel/engineers; and
c) Manual labor - includes women involved in farming and other agricultural activities. It also includes women who indicated they were involved in machine operation.

**Religion:** Five religious groups were identified: Catholic, Protestant, Other Christian, Islam, Traditionalist and other. This variable was recoded as follows: Catholic, Protestant, Other Christian = Christian, Islam = Islam, and traditionalist and other = other.

**Empowerment** is a term used to describe attainment or the process whereby the less privileged and powerful obtain a higher status, which puts them in better control of their lives (Odutolu, 2003). There are different conceptualizations of empowerment. This term is usually used to describe social and economic independence of women. For this study, empowerment is regarded as the ability and likelihood of young women to take assertive actions regarding their sexual behavior. Several studies conducted in Africa reiterate that the inability of young women to make objective choices about their sexual activity increases their vulnerability to HIV/AIDS and other unfavorable reproductive health outcomes.

This study will examine the influence of four indicators of female reproductive empowerment: knowledge of where to get a condom, knowledge of where to get a female condom, perception of intimate partner violence and discussion of family planning methods with friends. The assumption behind the selection of these variables is that women who know where to obtain both male and female condoms, who have discussed family planning methods with their friends, and those who have a more egalitarian view on intimate partner violence, are more empowered to make healthy sexual choices. Perception of intimate partner violence was assessed through an index
measuring respondent’s opinion on wife beating. Wife beating or spousal abuse is considered a major problem in Nigeria and can be traced to community norms. Subjective and cultural norms, which among other detrimental effects relegate virtually all-reproductive health decision-making powers to males, have been blamed for this problem. The gender power imbalance and struggles also permeates into pre-marital sexual relationships (Odutolu et al., 2003). However, very few studies have explored how power and gender role ideologies operate in adolescent sexual relationships (Gage, 2000). This study assumes that young women who disclose greater disapproval of intimate partner violence maybe more empowered to make positive sexual health choices. A detailed description of the variables selected and the recoding process is presented below.

**Intimate Partner Violence:** Perceptions of intimate partner violence were assessed through an index measuring whether respondents agreed with each of the following statements: wife beating is justified if a wife argues with her husband, wife beating is justified if a wife neglects the children, wife beating is justified if a wife goes out without telling her husband, wife beating is justified if a wife refuses to have sex with her husband, and wife beating is justified if a wife burns the food. Responses were coded:

1 = justified, and 0 = not justified. A new variable called intimate partner violence was created. The scale ranged from zero through five, with lower scores indicating poor perception of intimate partner violence (Cronbach’s apha 0.88).

**Knows where to get a Condom:** Responses to the question inquiring if young women know where to get a condom were recoded as follows: 1 = no, and 0 = yes.
**Knows where to get a Female Condom**: This variable was also recoded; it was coded as follows: 1 = no, and 0 = yes.

**Discussed Family Planning Methods with Friends**: Participants were asked if they had ever discussed methods of family planning with their friends. Responses to this question were recoded as follows: 1 = no, and 0 = yes.

**HIV/AIDS Awareness**

Factors under this domain measure HIV/AIDS prevention and transmission knowledge and attitudes towards HIV/AIDS information disseminated via mass media. This study also examined whether knowing someone who has HIV or has died of AIDS, and exposure to HIV/AIDS information through different mass media influences sexual behavior of young women. The inclusion of the last two variables was based on the assumptions that: 1) young women who know someone who has been infected with or had died of AIDS are more likely to engage in safe sexual behaviors, and 2) women who have greater access to HIV/AIDS information are more likely to know about the risks of engaging in unsafe sexual behaviors. A detailed description of the variables selected and the recoding process is presented below.

**HIV/AIDS Prevention Knowledge**: This was assessed through an index measuring whether respondents agreed with statements on the possible ways HIV/AIDS infection can be avoided. Respondents were asked to indicate what a person could do to prevent HIV/AIDS infection. The following options were selected for this study: abstain from sex, use condoms, keep to one partner, avoid prostitutes, avoid kissing, avoid mosquito bites, avoid sex with IUD users, limit number of sexual partners, avoid partners with many partners, avoid sharing food and water with AIDS patients and avoid sharing
toilets, and avoid sharing blades with AIDS patients. Responses to these questions were first recoded as follows: 1 = no, and 0 = yes. Possible scores ranged from one through 12, with higher scores indicating higher HIV/AIDS prevention knowledge (Cronbach’s alpha = .76).

**HIV/AIDS Transmission Knowledge:** This was also assessed using an index measuring whether respondents agreed with statements on the possible routes HIV/AIDS can be transmitted. Possible routes selected for this study include: through sexual intercourse, multiple sexual partners, sex with prostitutes, by not using condoms, through blood transfusion, kissing, having sex with homosexuals, mosquito bites, circumcision, through razor/clipper, through unsterilized/reused needles, and sharing food with an AIDS patients. Responses to these questions were first recoded as follows: 1 = no, and 0 = yes. A scale was subsequently created. The scale ranged from zero through 12, with a higher score indicating higher HIV/AIDS transmission knowledge. The scale has a very low Cronbach’s alpha = .36.

**HIV/AIDS Attitudes:** This was assessed through an index measuring whether respondents found the HIV/AIDS information disseminated through different sources acceptable. Sources of information identified include: radio, television, newspapers, churches/mosques, home and school. Responses were recoded as follows: 1= unacceptable, and 0 = acceptable. The scale ranged from one through six, with a higher score indicating high level of acceptance (Cronbach’s alpha = 0.96). This scale was latter divided into two categories: all HIV/AIDS information acceptable = 0, and some or no HIV/AIDS information acceptable = 1.
Knowing Someone Who has/has died of AIDS: This variable was recoded as follows: 1 = no, and 0 = yes.

Exposure to HIV/AIDS Information: This was assessed through an index measuring the number of sources of HIV/AIDS information per respondent. Sources of information identified include: radio, television, newspaper/magazine, pamphlets/posters, health workers, churches/mosques, schools/teachers, and friends/relatives. Responses to these questions were first recoded as follows: 1 = no, and 0 = yes. The scale with a relatively low Cronbach’s alpha = .44 ranged from zero through 10, with higher scores indicating more exposure to HIV/AIDS information.

Sexual Risk Behaviors

Indicators that measure sexual activity of young women include: age at first sex, condom use at first sex, condom use at last sex and recent sexual activity. This study hypothesizes that, women who begin sexual activity below the age of 18, did not use condoms at both first and last sex and had sex a few weeks prior to the interview are at high risk of contracting HIV/AIDS. Details of the recoding process are presented below.

Condom Use at First Sex: This variable was recoded as follows: 1 = no, and 0 = yes.

Condom Use at Last Sex: Responses to the question on whether respondents used a condom during their last sexual encounter were recoded as follows: 1 = no, and 0 = yes.

Recent Sexual Activity: This variable was recoded as follows: 1 = no, and 0 = yes.

Sexual Risk: This variable was created through the aggregation of all the sexual behaviors. Since there are four sexual behaviors examined in this study, the scale ranged from zero through five, with a higher value indicating higher risk and 0
indicating no risk. The scale has a low Cronbach’s alpha = .32. The scale was normally
distributed with a mean of 2.5.

3.3 Research Methodology

Data analysis will be carried out in a three-step process as follows:

Step One - Univariate Analysis

Step Two – Bivariate Analysis

Step Three – Multivariate Analysis

3.3.1 Univariate Analysis

This involves the examination and description of the basic composition of the
samples in relation to the variables selected. Frequency distributions of both the
dependent and independent variables were run and examined. This examination helped
determine data transformations like: recoding, and the construction of scales and new
variables. Cronbach’s alpha was computed for all scaled variables. This helped to
determine internal consistency of scaled variables. Results from univariate analysis are
presented in chapter four.

3.3.2 Bivariate Analysis

Associations between variables were examined using various statistical tests.
Both parametric and non-parametric tests were employed. Tests used include: The
Mann Whitney U Test, One Way Analysis of Variance Test of mean differences, Chi
Square Test, Kruskal Wallace Test, the independent t test and the Spearman’s Rank
Test of correlation. The Mann Whitney U test was used to determine association
between continuous variables and categorical variables with two observations.
The Kruskal Wallace Test was employed to examine the relationship between continuous variables and categorical variables with more than two observations. The Chi-Square Test was used to examine association between two categorical variables. The Spearman’s Rank Test was used to examine the relationship between continuous variables and non-parametric interval variables. One Way Analysis of Variance was used to examine the relationship between parametric variables and categorical variables with more than two observations. The independent t test was used to examine the relationship between a continuous variable that is normally distributed and categorical variables with two observations.

3.3.3 Multivariate Analysis

Binary Linear regression was employed to examine the combined effect of the independent variables on the dependent variable: sexual risk. Only the variables that were significantly associated with sexual risk in the bivariate analysis were included in this analysis. This analysis helped determine mutual exclusivity and interdependence of these variables as predictors of sexual risk. All analyses were carried out using the Statistical Package for Social Sciences (SPSS v. 12.0). Results of all analysis are presented in the subsequent chapters.

This study will provide answers to the following questions:

1. What are the differences between young women who have had sex and those who have not as a function of the independent variables?

2. What is the relative influence of predictors of HIV/AIDS risk on the sexual behaviors of the young women?

3. What are the most prominent predictors of sexual risk in young unmarried women in Nigeria?
CHAPTER FOUR

Descriptive Statistics

The Sample Population

4.1 Demographic Characteristics

A total of 1,836 women aged 15-24 who had never been married were selected from the dataset. More than half (1,240; 67.5%) of them were aged 15-19 years, while 596 (32.5%) were 20 years or older. The age distribution of the sample is illustrated in Figure 3.1. The mean age of the sample is 18.3. This observed age distribution in the study population closely reflects the age distribution of women in the same age groups in the entire country based on the last census conducted in the country. The majority of the women (1,345; 73.3%) live in male-headed households in which they are daughters of the household head. Sizeable proportions live with their grandparents/parent (5.9%), sister (7.2%), or other relative (7.5%). About 2% of them indicated that they are the heads of the households they live in. Some of these households (133; 7.2%) do not have any basic essential household amenity; (1,027; 56%) have less than four amenities and only (74; 4%) have seven. This clearly indicates that material standard of living across the country is relatively low regardless of geographic location of residence.
Figure 4.1: Age Distribution of Respondents

Nearly three quarters (74.2%) of the study population is not employed. Among those who work, (176; 9.6%) are sales assistants or street vendors, (119; 6.5%) are involved in agriculture, the majority of them being either farmers or fishermen. A sizeable proportion work as tailors (46; 2.5%), while (29 1.6%) are hairdressers. The majority (66.6%) of the women has secondary school education, (6.9%), have no education, (19.5%) have primary education, and (7.0%) higher education. More women who have no education, primary and secondary education live in rural areas, while more than 50% of those with higher education live in urban areas. Religious affiliations were virtually evenly distributed, with one exception. The largest religious group was the other Christian 27.8% (Christians who identified themselves as neither Catholics or Protestants), while the smallest was the traditional religious beliefs (.5%) Other groups represented are Protestants (23.7%), Muslims (23.9%) and Catholics (23.8%).
Fifty-six ethnic groups were represented in this study. This represents only one fifth of Nigeria's ethnic groups. Breakdown of the major groups are as follows: Igbo (28.8%), Yoruba (19.4%) and Hausa (6.8%). This distribution of major ethnic groups does not exactly reflect divisions of major ethnic groups in the country. Divisions across residence type for the study population revealed that (862; 46.9%) of the study population resides in urban areas, while (974; 53.1%) live in rural areas. Access to basic social amenities and infrastructure in rural areas remain strained across the entire country, making it very difficult for populations that make their homes in these areas to receive adequate health information that will help them make proper health decisions. An important implication of this problem is that populations in these parts of the country have minimal access to adequate HIV information. A consequence of this is already obvious as rural areas in Nigeria are the most affected by the epidemic. Analyses carried out in this study will determine if levels of HIV/AIDS awareness influence sexual behavior of unmarried women in the country.

4.2 HIV/AIDS Awareness

As mentioned earlier in this study, young people in Nigeria are highly aware of HIV/AIDS; however misconceptions of its transmission and prevention abound in this population. Data for this study confirm this observation. Answers to questions on HIV/AIDS related awareness are presented in Table 4.1 below. A large proportion of the population has heard of AIDS; however HIV/AIDS prevention and transmission knowledge is very poor.
**Table: 4.1 HIV/AIDS Awareness**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever Heard of AIDS</td>
<td>1568</td>
<td>85.4</td>
</tr>
</tbody>
</table>

**HIV/AIDS Prevention Knowledge**

| Know 9-12 Ways to Avoid HIV/AIDS | 21 | 1.2 |
| Know 4-8 Ways to Avoid HIV/AIDS | 1537 | 83.8 |
| Knows Less than Three Ways to Avoid AIDS | 278 | 15.1 |

**HIV/AIDS Transmission Knowledge**

| Knows 9-12 Ways HIV/AIDS can be Transmitted | 41 | 2.3 |
| Knows 4-8 Ways HIV/AIDS can be Transmitted | 1785 | 97.2 |
| Knows Less than Three Ways HIV/AIDS can be Transmitted | 10 | .6 |

**HIV/AIDS Attitudes**

<table>
<thead>
<tr>
<th>Acceptable (%)</th>
<th>Unacceptable (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV/AIDS Info In all Mass Media – Acceptable</td>
<td>1408</td>
</tr>
<tr>
<td>HIV/AIDS Info in all Mass Media – Unacceptable</td>
<td>335</td>
</tr>
</tbody>
</table>

**Exposure to AIDS Information**

<table>
<thead>
<tr>
<th>Acceptable (%)</th>
<th>Unacceptable (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have not Heard about HIV/AIDS from any Source</td>
<td>275</td>
</tr>
<tr>
<td>Have Learned Most about HIV/AIDS from one Source</td>
<td>605</td>
</tr>
<tr>
<td>Have Learned Most about HIV/AIDS from Between 2 and 6 Sources</td>
<td>952</td>
</tr>
<tr>
<td>Have Learned Most about HIV/AIDS from 10 Sources</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acceptable (%)</th>
<th>Unacceptable (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knows Someone who Has or Has Died of HIV/AIDS</td>
<td>252</td>
</tr>
<tr>
<td>HIV/AIDS Risk Perception</td>
<td>281</td>
</tr>
</tbody>
</table>

Source: Study
A high proportion know between four to eight ways HIV/AIDS can be avoided. A relatively small proportion know nine or more ways, while approximately a quarter know less than three ways to avoid HIV/AIDS. Concerning transmission, a substantial number know between four to eight ways AIDS can be transmitted, a fewer number know nine or more ways, while less than 10% know less than three ways the infection can be transmitted.

![Chart showing knowledge of HIV/AIDS prevention and transmission](image)

**Figure 4.2: HIV/AIDS Prevention and Transmission Knowledge**

*Source: Study*

This reflects findings from previous studies conducted among young people in Nigeria. A bulk of the study population find HIV/AIDS information disseminated through all mass media acceptable. However, a small fraction disagrees. Although the proportion of those who find the messages unacceptable is small compared to the opinion of the majority, possible explanations for the unacceptability of HIV/AIDS information are worth investigating.
Approximately three quarters of the study population has not heard about HIV/AIDS through any source. The majority of those who have, heard it only from one source, while less than a tenth of them have heard of HIV/AIDS from all the ten sources surveyed. Less than half of the population knows someone who has or has died of AIDS. Cross tab analyses reveal that more people who live in the rural areas know someone who has or has died of AIDS. This invariably reveals the disproportionate burden of the HIV/AIDS epidemic based on geographic division in the country.

Almost three quarters of the population does not perceive any risk of HIV/AIDS, as opposed to less than a quarter who do. More women living in the rural areas feel they are at risk of the HIV/AIDS infection. The fact that most of the young women are not sexually active may explain why they do not perceive any risk to HIV/AIDS. Unfortunately, HIV/AIDS is not only transmitted sexually; hence, their low perception of risk may feature as a predisposing factor in exposure to other non-sexual risk avenues of the infection.

4.3 Empowerment

This section documents frequencies of the responses to questions that measure some aspects of female reproductive empowerment. Only (753; 41.0%) of the sample population think that wife beating is not justified in any circumstance, leaving a total of (1,083; 59.1%) who think it is justified in at least one circumstance. Among those who think it is justified in some circumstances, (365; 19.9%) think it is justified in all circumstances. Figure 4.3 illustrates the distribution of the perception of intimate partner violence. These responses may reflect cultural, religious and social influences;
however, the factors associated with this observed pattern will be explored in the next section.

![Bar chart showing the percentage of respondents in different categories for Wife Beating Unjustified (Number of Ways)](chart)

Figure 4.3: Disapproval of Wife Beating

A high proportion (1261; 68.7%) of the respondents indicated they did not know where to get a male condom. Only (67; 3.6%) indicated they knew where to get a female condom and (172; 9.4%) acknowledged that they have discussed about family planning methods with their friends.

### 4.4 The Sexually Active Subset

Out of 1,836 unmarried women aged 15-24, (630; 34.4%) acknowledged they had had sexual intercourse. Table 4.1 identifies the frequencies of the sexual behaviors. The mean age for sexual debut is 16.7; more than half of those who have had sexual intercourse had it before the age of 18. Figure 4.1 shows the distribution of age at first sex in the population. The youngest age at first sexual debut was seven years.
Table 4.2: Sexual Risk Behaviors

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have had Sexual Intercourse</td>
<td>630</td>
<td>34.7</td>
</tr>
<tr>
<td>Have not had Sexual Intercourse</td>
<td>1202</td>
<td>65.5</td>
</tr>
<tr>
<td>Age at First Sexual Intercourse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;18 years</td>
<td>499</td>
<td>27.2</td>
</tr>
<tr>
<td>&gt;18 years</td>
<td>1333</td>
<td>72.6</td>
</tr>
<tr>
<td>Sexually Active in the Last Four Weeks</td>
<td>208</td>
<td>33.0</td>
</tr>
<tr>
<td>Condom Use at First Sexual Intercourse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>507</td>
<td>80.5</td>
</tr>
<tr>
<td>Yes</td>
<td>120</td>
<td>19.0</td>
</tr>
<tr>
<td>Condom Use at Last Intercourse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>364</td>
<td>57.8</td>
</tr>
<tr>
<td>Yes</td>
<td>143</td>
<td>22.7</td>
</tr>
</tbody>
</table>

Source: Study

The age at first sex gradually increased arithmetically up to age fifteen and then declined drastically at ages 16 and 17. This decline however precedes a peak at age eighteen. The number of women who began sexual intercourse after age 18 declined drastically. A high proportion of those who have had sexual intercourse did not use a condom during their first sexual debut and only a small proportion of them used condoms at their last sexual intercourse. More women in urban areas used condoms at both first and last sex. Slightly half of the women who have had sex were sexually active in the last four weeks preceding the interview, most of them live in rural areas. The majority of them had secondary education (448; 71.1%) and most of them were Christians (539; 85.6%). This group is almost evenly divided by residence type. Nearly half (312; 49.5%) of them live in urban areas, while 318 (50.5%) reside in the rural areas. The number of women who had had sex by age fifteen was higher in rural areas; however, urban areas had more women who had had sex by age 20.
Figure 4.4: Age at First Sex

4.5 The Non-sexually Active Subset

A majority (1,202; 65.6%) of the sample population indicated they have never had sex. Approximately 80% of them are below 20 years. A sizeable number (64.4%) have attended secondary school, 21.7% are the primary school level, and 9.0% indicated they have not been to school. More than half (78.9%) of them are not employed. Among those who are employed, 98 work as sales assistants/street vendors, 80 work as farmers and 22 work as tailors. The remaining (54) women are distributed across other occupations. They are almost evenly distributed by residence type, 54.4% of them live in rural areas, while 45.7% of them live in urban areas.
CHAPTER FIVE

Bivariate and Multivariate Analysis

This chapter, in three sections, documents results from bivariate and multivariate analysis carried out. The first section contains results from bivariate analysis aimed at exploring the differences between the sexually active group and the non-sexually active sample. This section provides answers to research question one. The second section presents results from bivariate analysis examining the relationships between the independent variables (HIV/AIDS risk factors) and the dependent variable (sexual behaviors). Here, answers to research Question Two are presented. Results from the regression analysis providing answers to the third research question are presented in the last section.

5.1 Research Question One

What are the differences between the young women who have had sex and those who have not as a function of the independent variables in the socio-demographic, empowerment and HIV/AIDS awareness domains?

Socio-demographic factors

Results of bivariate analysis reveal that the socio-demographic characteristics of the two groups of women differ significantly. Table 5.1 below shows the proportion of
women who have had sex based on the socio-demographic indicators. The likelihood of having had sex increased with advancement in age. However, more women were more likely to have had sex at age 22. The proportion of women who had sex declined after age 22 but still remained higher than that for ages 15-21 (t=18.46, p<.001). A similar trend is seen in the division by educational level; the likelihood of having had sex increased with increase in educational level (Z= -7.22, p<.001). Christian women are almost two times more likely than Muslim women and women of other religious affiliation to have had sex. A large proportion of women who reported not having had sex are Muslim (χ²(2) = 52.86, p<.001).

The likelihood of sexual involvement also differed by employment type; revealing that women who are employed in professional careers are more likely to have had sex than women in other professions (χ²(2) = 44.12, p<.001). Women employed in the vocational professions are the next most likely to have begun sexual activity, while those employed in the manual labor sector and those unemployed are least likely to have had sex. Women who are unemployed are more likely not to have had sex. The likelihood of having had sex did not differ by material standard of living (t = 1.48, p = .13). There was also no significant difference based on residence type (χ²(1) = 2.46, p = .12).
Table 5.1 Percentage of Young Unmarried Women Aged 15-24 who Report Having Had Sex by Socio-demographic Characteristics

<table>
<thead>
<tr>
<th>Indicator</th>
<th>% Had Sex</th>
<th>n</th>
<th>Total (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>8.3</td>
<td>28</td>
<td>336</td>
</tr>
<tr>
<td>16</td>
<td>15.9</td>
<td>35</td>
<td>220</td>
</tr>
<tr>
<td>17</td>
<td>28.8</td>
<td>63</td>
<td>219</td>
</tr>
<tr>
<td>18</td>
<td>27.6</td>
<td>79</td>
<td>289</td>
</tr>
<tr>
<td>19</td>
<td>46.0</td>
<td>81</td>
<td>176</td>
</tr>
<tr>
<td>20</td>
<td>50.9</td>
<td>114</td>
<td>224</td>
</tr>
<tr>
<td>21</td>
<td>56.5</td>
<td>61</td>
<td>108</td>
</tr>
<tr>
<td>22</td>
<td>67.8</td>
<td>80</td>
<td>118</td>
</tr>
<tr>
<td>23</td>
<td>63.6</td>
<td>49</td>
<td>77</td>
</tr>
<tr>
<td>24</td>
<td>58.8</td>
<td>40</td>
<td>68</td>
</tr>
<tr>
<td><strong>Educational Level</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher Education</td>
<td>53.9</td>
<td>69</td>
<td>128</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>36.7</td>
<td>448</td>
<td>1,222</td>
</tr>
<tr>
<td>Primary Education</td>
<td>26.9</td>
<td>96</td>
<td>357</td>
</tr>
<tr>
<td>No Education</td>
<td>13.6</td>
<td>17</td>
<td>125</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>39.1</td>
<td>539</td>
<td>1380</td>
</tr>
<tr>
<td>Muslim</td>
<td>20.1</td>
<td>88</td>
<td>437</td>
</tr>
<tr>
<td>Other</td>
<td>27.3</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td><strong>Employment Type</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td>54.5</td>
<td>24</td>
<td>44</td>
</tr>
<tr>
<td>Vocational</td>
<td>48.2</td>
<td>133</td>
<td>276</td>
</tr>
<tr>
<td>Manual Labor</td>
<td>40.5</td>
<td>62</td>
<td>153</td>
</tr>
<tr>
<td>Not Employed</td>
<td>30.2</td>
<td>411</td>
<td>1359</td>
</tr>
<tr>
<td><strong>Material Standard of Living</strong>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Amenity</td>
<td>32.3</td>
<td>43</td>
<td>133</td>
</tr>
<tr>
<td>1-3 Amenities</td>
<td>32.9</td>
<td>337</td>
<td>1024</td>
</tr>
<tr>
<td>4-6 Amenities</td>
<td>35.5</td>
<td>214</td>
<td>602</td>
</tr>
<tr>
<td>All Amenities</td>
<td>49.3</td>
<td>36</td>
<td>73</td>
</tr>
<tr>
<td><strong>Residence Type</strong>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>36.2</td>
<td>312</td>
<td>861</td>
</tr>
<tr>
<td>Rural</td>
<td>32.7</td>
<td>318</td>
<td>971</td>
</tr>
</tbody>
</table>

* Not significantly associated
Empowerment Indicators

Empowerment differed significantly between the two groups. Table 5.2 shows the proportion of women who are more likely to have had sex based on these indicators. Women who acknowledge that wife beating is justified in some circumstances are more likely to be sexually active than their counterparts who think it is unjustified in any circumstance. Women who think wife beating is justified in all circumstances are less likely to have had sex (t=3.19, p=.001). Women who know where to obtain both male (χ²(1) = 174.50, p <.001) and female condoms (χ²(1) = 17.49, p <.001) are almost two times more likely to have had sex than their counterparts. Among those who have not had sex, the majority of them do not know where to get both kinds of condoms. Those who have discussed family planning methods with their friends are also two times more likely to have had sex than their counterparts (χ²(1) = 85.44, p <.001). Among those who have not had sex, women who have not discussed family planning methods with their friends are two times the numbers who have.
Table 5.2 Percentage of Young Unmarried Women Aged 15-24 who Report Having Had Sex by Empowerment Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>% Had Sex</th>
<th>n</th>
<th>Total (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intimate Partner Violence (Wife Beating)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justified in Some Circumstances</td>
<td>39.6</td>
<td>283</td>
<td>715</td>
</tr>
<tr>
<td>Unjustified in any Circumstance</td>
<td>35.3</td>
<td>266</td>
<td>753</td>
</tr>
<tr>
<td>Justified in all Circumstances</td>
<td>22.3</td>
<td>81</td>
<td>364</td>
</tr>
<tr>
<td>Knows Where to obtain a Male Condom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>56.0</td>
<td>320</td>
<td>571</td>
</tr>
<tr>
<td>No</td>
<td>24.4</td>
<td>307</td>
<td>1258</td>
</tr>
<tr>
<td>Knows Where to obtain a Female Condom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>58.2</td>
<td>39</td>
<td>67</td>
</tr>
<tr>
<td>No</td>
<td>33.5</td>
<td>591</td>
<td>1765</td>
</tr>
<tr>
<td>Discussed Family Planning Methods with Friends</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>66.3</td>
<td>114</td>
<td>172</td>
</tr>
<tr>
<td>No</td>
<td>31.1</td>
<td>516</td>
<td>1659</td>
</tr>
</tbody>
</table>

Source: Study

HIV/AIDS Awareness Indicators

HIV/AIDS awareness also differed significantly between the two groups.

Table 5.3 shows the percentage of women who are most likely to have had sex based on these indicators. Women who find all the information on HIV/AIDS disseminated through the media acceptable are more likely to have had sex compared to those who find some or none of the information acceptable ($\chi^2 = 33.61$, p<.001).

A similar trend was identified among women who have not had sex; the majority of them find HIV/AIDS information acceptable.
The likelihood of having had sex increased with increase in exposure to more sources of HIV/AIDS information ($t = 5.30$, $p < .001$). The likelihood of not having had sex was higher for women who were exposed to between zero and four sources of HIV/AIDS information. Women who know someone who has/has died of AIDS were more likely to have had sex ($\chi^2_{(1)} = 6.03$, $p = .009$), while more women who have had sex perceive some risk to the HIV infection ($\chi^2_{(1)} = 5.38$, $p = .020$). The majority of the women who have not had sex do not know anybody who has/has died of AIDS and equally perceive no risk to the infection. HIV/AIDS prevention knowledge ($t = 2.30 = .02$), and HIV/AIDS transmission knowledge ($t = 4.8$, $p < .001$) also differed significantly between the groups. Women who have greater HIV/AIDS prevention and transmission were more likely to have had sex.

**Summary**

Results from these initial bivariate analyses establish the fact that the women who have had sex and those who have not are dissimilar based on the predictors of HIV/AIDS risk. In reference to socio-demographic indicators, results disclose that women who are older in age, at higher level of education, employed as professionals, and are Christians are more likely to have begun sexual activity. It also appears that women who are more likely to have had sex are those that are more empowered and have greater HIV/AIDS awareness. The following section examines the influence of the independent variables on the sexual behavior of the women.
Table 5.3 Percentage of Young Unmarried Women Aged 15-24 who Report Having Had Sex by HIV/AIDS Awareness Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>% Had Sex</th>
<th>n</th>
<th>Total (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HIV/AIDS Prevention Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knows 9-12 Ways</td>
<td>57.1</td>
<td>12</td>
<td>21</td>
</tr>
<tr>
<td>Knows 4-8 Ways</td>
<td>34.4</td>
<td>528</td>
<td>1534</td>
</tr>
<tr>
<td>Knows less than three Ways</td>
<td>32.5</td>
<td>90</td>
<td>277</td>
</tr>
<tr>
<td><strong>HIV/AIDS Transmission Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knows 9-12 Ways</td>
<td>41.5</td>
<td>17</td>
<td>41</td>
</tr>
<tr>
<td>Knows 4-6 Ways</td>
<td>34.3</td>
<td>610</td>
<td>1781</td>
</tr>
<tr>
<td>Knows less than three Ways</td>
<td>30.0</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td><strong>HIV/AIDS Attitudes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Information Acceptable</td>
<td>37.9</td>
<td>533</td>
<td>1405</td>
</tr>
<tr>
<td>Some Information Acceptable</td>
<td>32.3</td>
<td>30</td>
<td>93</td>
</tr>
<tr>
<td>No Information Acceptable</td>
<td>20.1</td>
<td>67</td>
<td>334</td>
</tr>
<tr>
<td><strong>Exposure to HIV/AIDS Information</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-10 Sources</td>
<td>40.0</td>
<td>28</td>
<td>70</td>
</tr>
<tr>
<td>1-4 Sources</td>
<td>37.2</td>
<td>554</td>
<td>1489</td>
</tr>
<tr>
<td>No Source</td>
<td>17.6</td>
<td>48</td>
<td>273</td>
</tr>
<tr>
<td><strong>Knows Someone who Has/has Died of AIDS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>41.3</td>
<td>252</td>
<td>610</td>
</tr>
<tr>
<td>No</td>
<td>34.7</td>
<td>328</td>
<td>944</td>
</tr>
<tr>
<td><strong>HIV/AIDS Risk Perception</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>43.6</td>
<td>122</td>
<td>280</td>
</tr>
<tr>
<td>No</td>
<td>36.2</td>
<td>464</td>
<td>1283</td>
</tr>
</tbody>
</table>

Source: Study
5.2 **Research Question Two**

What are the predictors of HIV/AIDS risk among those who have had sex?

5.2.1 **Socio-demographic Factors and Sexual Behaviors**

Results reveal that socio-demographic factors significantly influenced the age at which young women became sexually active, the likelihood that they used condoms during their first and last sexual encounters, and the likelihood that they had a sexual encounter recently. Age was directly associated with age at first sexual encounter (\( r = .60, p < .01 \)), revealing that the older women had their first sexual encounter at an older age and vice versa. This suggests that young women are become sexually active at a younger age. Age was not significantly associated with recent sexual activity (\( t = 1.08, p = .28 \)) and condom use at both first (\( t = -.80, p = .43 \)) and last sex (\( t = -1.37, p = .17 \)). Higher educational attainment was generally associated with safer sexual behaviors. Age at first sex increased with increase in educational attainment (\( r = .25, p < .01 \)). Young women with only primary education were more likely to have started sexual activity at an earlier age than the rest of the women.

Analyses reveal that condom use at both first (\( Z = -4.54, p < .001 \)) and last sex (\( Z = -4.80, p < .001 \)) was positively associated with educational level. Most of the women who used condoms on both occasions have secondary education. Educational attainment was not significantly associated with recent sexual activity. (\( Z = -1.51, p = .13 \))

Socio-economic status assessed by material standard of living also appeared to be an important determinant of sexual behavior. Delay of sexual initiation was associated with higher material standard of living (\( r = .14, p < .01 \)). Women living in
homes that have more basic household amenities started having sex at a later age.

Material standard of living significantly influenced the likelihood of condom use at first 
(t = -3.56, p<.001) and last sexual encounter (t = -5.28, p<.001). These results generally 
disclose that women with higher socio-economic status were more likely to have used 
condoms during their first and last sexual encounter compared to their counterparts who 
were less financially privileged. Material standard of living was not significantly 
associated with recent sexual activity (t = -1.48, p = .14).

Although women living in rural areas began having sex at a younger age 
compared to those living in urban areas (t =3.09, p=.002), they were less likely to have 
used condoms during their last sexual experience (t = -2.82, p = .005). Condom use at 
first sexual encounter (χ²(1) = 3.70, p = .054) did not differ significantly by place of 
residence. Residence type was also not significantly associated with recent sexual 
activity (χ²(1) = .04, p = .84).

Religious affiliation predicted condom use at first sexual encounter. Women who 
identify themselves as Christians were more likely to use condoms during their first 
sexual encounter compared to those who identify themselves as Muslim or other 
religious faith (χ²(1) = 6.87, p = .032). Age at first sexual intercourse (F = .45, p = .63), 
condom use at last sexual encounter (χ² = 1.268, p = .531) and recent sexual activity (χ² = 
4.220, p = .121) did not differ significantly by religious affiliation.

The type of occupation women engaged in appeared to be an important 
determinant of age at first sex (F=10.37, p<.01). Women employed as professionals 
(medical, nursing, clerical and education) were more likely to have started having sex at 
a later age, while women who were involved in manual labor (farming, fishing, machine
operation) were more likely to have started having sex at a younger age. Women who were not employed were more likely to have used condom during their first sexual encounter ($\chi^2(3) = 8.54, p = .036$). Condom use at last sex ($\chi^2(3) = 6.10, p = .102$) and recent sexual activity ($\chi^2(3) = 2.72, p = .43$) were not significantly associated with employment type.

In an attempt to examine the influence of the different independent variables on all the sexual behaviors collectively, a new variable (sexual risk) was created. Analysis revealed that sexual risk was inversely associated with age, material standard of living, and educational attainment. Results reveal that sexual risk decreases with advancement in age ($r = -.28, p < .01$) and socio-economic status ($r = -.24, p < .001$). Sexual risk decreases with advancement in educational level ($r = -.25, p < .001$). Sexual risk is higher for women living in rural areas ($t = -3.33, p = .001$) and women employed in the manual labor sector ($F = 5.10, p = .002$). Religious affiliation was not significantly associated with sexual risk ($F = 1.27, p = .28$).

5.2.2 Empowerment Indicators and Sexual Risk Behaviors

Empowerment indicators measured the women’s ability to take assertive actions to ensure safer sexual behaviors. Perception of intimate partner violence appeared as an important predictor of safer sexual behavior. Women who had higher disapproval of intimate partner violence had their first sexual experience at an older age ($r = .13, p = .001$). They were also more likely to use condoms during their first ($t = -.347, p = .001$) and last ($t = -.456, p < .01$) sexual encounters. Perception of intimate partner violence was not significantly associated with recent sexual activity ($t = .60, p = .55$).
These findings suggest that women who accept intimate partner violence are more likely to engage in risky sexual behaviors.

Women who have discussed family planning methods with their friends were more likely to use condoms at their last sexual encounter ($\chi^2 = 5.052$, $p = .025$). These women were more likely to have been sexually active a few weeks prior to the interview ($\chi^2 = 9.901$, $p = .002$). Discussing family planning methods did not influence age at sexual initiation ($t = - .42$, $p = .70$) and condom use at first sex ($\chi^2 = 2.833$, $p = .092$). Limited access to contraceptives has been implicated as a risk factor for HIV/AIDS infection in young women in sub-Saharan Africa. Young women cannot engage in safer sexual behaviors if they do not know where to obtain contraceptives or other health products. Bivariate analyses were carried out to determine if knowing where to obtain condoms was a significant predictor of sexual behavior. Results reveal that knowing where to obtain condoms is an important predictor of sexual behavior. Women who indicated they knew were to obtain male condoms were more likely to begin sexual activity at an older age ($t = -2.34$, $p = .019$). Those who indicated they knew where to obtain female condoms ($-3.62$, $p < .01$) were also more likely to delay sexual initiation.

Women who knew where to obtain a male condom were more likely to have used a condom at both first ($\chi^2 (1) = 34.09$, $p < .01$) and last sexual encounters ($\chi^2 (1) = 61.56$, $p < .01$). Similarly, those who knew where to obtain female condoms were more likely to have used a condom during their first ($\chi^2 (1) = 3.63$, $p = .06$) last sexual encounters ($\chi^2 (1) = 4.46$, $p = .035$). This finding reveals that the likelihood that young
women use condoms during sex is partly dependent on their knowing where to obtain the condoms.

An interesting implication of this finding is that young women may be able to engage in safer sex behaviors if they have access to condoms.

Analysis carried out to examine the correlations between empowerment indicators and overall sexual risk revealed similar inclination. Sexual risk was significantly associated with perception of intimate partner violence (r = -.21, p<.01 and knowing where to obtain a male condom (t = 4.03, p<.001). Results indicate that women who have greater disapproval of intimate partner violence and know where to obtain male condoms are less likely to engage in sexual risk behaviors. Knowing where to obtain a female condom (t = 1.92, p=.055) and discussing family planning methods with friends (t = .13, p=.90) were not significantly associated with sexual risk.

5.2.3 HIV/AIDS Awareness and Sexual Risk Behaviors

Findings from prior studies suggest that low HIV/AIDS awareness among youth is strongly linked to greater likelihood of sexual risk behaviors. Results from bivariate analysis carried out in this study confirm this finding. Among all the HIV/AIDS awareness variables examined, HIV/AIDS prevention knowledge and HIV/AIDS transmission knowledge emerged as very important predictors of sexual behavior. Results indicate that women who have greater HIV/AIDS prevention knowledge (r=.14, p<0.01) and HIV/AIDS transmission knowledge (r = .12, p<0.01) became sexually active at an older age. Women who had greater HIV/AIDS prevention (t = -3.38, p=.001) and transmission knowledge (t = -3.32, p =.001) were also more likely to use
condoms during their first sexual encounter. A similar observation was made between HIV/AIDS prevention knowledge ($t = -3.15$, $p = .002$) and HIV/AIDS transmission knowledge ($t = -4.41$, $p < 0.01$) and condom use at last sexual encounter. HIV/AIDS prevention ($t = .60$, $p = .54$) and transmission ($t = .70$, $p = .50$) knowledge were not significantly associated with recent sexual activity. Young women’s knowledge about the HIV/AIDS disease is highly dependent on their exposure to HIV/AIDS information.

Results from analysis reveal that women exposed to more sources of HIV/AIDS information were more likely to begin sexual activity at an older age ($r = .11$, $p = .004$) and use condoms during their last sexual encounter ($t = -4.29$, $p < 0.01$). Condom use at first sex ($t = -1.29$, $p = .19$) and recent sexual activity ($t = 1.01$, $p = .31$) were not significantly associated with exposure to HIV/AIDS information. These findings are quite noteworthy. They suggest that young women may be able to postpone sexual involvement and use condoms if they are more exposed to HIV/AIDS information and if they have greater HIV/AIDS prevention and transmission knowledge.

It is important however, to note that people’s attitudes towards HIV/AIDS information disseminated through mass media may play an intermediary role between their exposure and knowledge of HIV/AIDS and their sexual behaviors. Results reveal that women who had better attitudes towards HIV/AIDS information disseminated via mass media were more likely to delay sexual involvement ($t = -2.90$, $p = .004$) as well as use condoms during their last sexual encounter ($\chi^2_{(1)} = 13.21$, $p < 0.01$). Attitudes to HIV/AIDS information did not appear as a significant predictor of condom use at first sex ($\chi^2_{(1)} = 3.28$, $p = .072$) and recent sexual activity ($t = -1.53$, $p = .21$).
Knowing someone who has/has died of AIDS was significantly associated with age at first sexual encounter \((t = -2.87, p = .006)\). This reveals that women who knew someone who has/has died of HIV/AIDS started having sex at an older age. They were also less likely to have had sex a few weeks prior to the interview \((\chi^2(1) = 3.93, p = .047)\). Knowing someone who has/has died of AIDS did not influence condom use at both first \((\chi^2(1) = .00, p = .93)\) and last \((\chi^2(1) = .292, p = .58)\) sexual encounters.

HIV/AIDS risk perception influenced the age at which the young women became sexually active. Women who perceived more risk to the disease were more likely to delay onset of sexual activity \((t = -2.46, p = .014)\). Condom use at both first \((\chi^2(1) = .42, p = .51)\) and last \((\chi^2(1) = .06, p = .80)\) sex, and recent sexual activity \((\chi^2(1) = .429, p = .51)\) were not significantly associated with HIV/AIDS risk perception.

Analysis carried out to examine the association between HIV/AIDS awareness indicators and overall sexual risk revealed that almost all HIV/AIDS awareness indicators are significantly associated with sexual risk. Results indicate that sexual risk decreases as both HIV/AIDS prevention knowledge \((r = -.15, p < .01)\) and HIV/AIDS transmission knowledge increases \((r = -.16, p < .001)\). Women who find HIV/AIDS information disseminated through the media acceptable were less likely to engage in risky sexual behavior \((t = 3.40, p < .001)\). Women who are more exposed to HIV/AIDS information \((r = -.12, p = .002)\) also have lower sexual risk to HIV/AIDS. Women who know someone who has or has died of AIDS have higher sexual risk \((t = -2.47, p = .014)\). Table 5.4 below contains a summary of the findings from the bivariate analysis. The table identifies all the independent variables significantly associated with each dependent variable.
Table 5.4: Summary of Bivariate Associations

<table>
<thead>
<tr>
<th>Sexual Behaviors</th>
<th>Socio-Demographic Indicators</th>
<th>Empowerment Indicators</th>
<th>HIV/AIDS Awareness Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at first sex (Younger)</td>
<td>Younger age</td>
<td>Acceptance of intimate partner violence</td>
<td>Poor HIV/AIDS prevention knowledge</td>
</tr>
<tr>
<td></td>
<td>Lower educational level</td>
<td>Does not know where to get a male condom</td>
<td>Poor HIV/AIDS transmission knowledge</td>
</tr>
<tr>
<td></td>
<td>Lower material standard of living</td>
<td></td>
<td>Poor HIV/AIDS Attitudes</td>
</tr>
<tr>
<td></td>
<td>Residence type (rural)</td>
<td></td>
<td>Limited exposure to HIV/AIDS information</td>
</tr>
<tr>
<td></td>
<td>Employment type (Manual labor)</td>
<td></td>
<td>Does not know someone who has or has died of AIDS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does not know where to get a female condom</td>
<td>Poor HIV/AIDS risk perception</td>
</tr>
<tr>
<td>Condom use at first sex (Yes)</td>
<td>Higher educational level</td>
<td>Disapproval of intimate partner violence</td>
<td>Greater HIV/AIDS prevention Knowledge</td>
</tr>
<tr>
<td></td>
<td>Higher material standard of living</td>
<td>Knows where to get a male condom</td>
<td>Greater HIV/AIDS transmission knowledge</td>
</tr>
<tr>
<td></td>
<td>Religion (Christian)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Employment type (Not employed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condom use at last sex (Yes)</td>
<td>Higher educational level</td>
<td>Disapproval of intimate partner violence</td>
<td>Greater HIV/AIDS prevention Knowledge</td>
</tr>
<tr>
<td></td>
<td>Higher material standard of living</td>
<td>Discussed FP with friends</td>
<td>Greater HIV/AIDS transmission knowledge</td>
</tr>
<tr>
<td></td>
<td>Residence type (rural)</td>
<td>Knows where to get a male condom</td>
<td>Limited exposure to HIV/AIDS information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Knows where to get a female condom</td>
<td>Poor HIV/AIDS attitudes</td>
</tr>
<tr>
<td>Recent sexual Activity (Yes)</td>
<td></td>
<td>Discussed FP with friends</td>
<td>Knows Someone who has or has died of AIDS</td>
</tr>
</tbody>
</table>

Source: Study (FP – Family Planning Methods)
5.3 Research Question Three (Multivariate Analysis)

What are the most important predictors of sexual risk in young unmarried women in Nigeria?

Multiple linear regression was employed to identify factors associated with sexual risk when other factors were controlled. Since the primary aim of this analysis was to determine the most important predictors of sexual risk only the variables that were significantly associated with the dependent variable (sexual risk) at the bivariate level, were included in the analysis. The variables include: age, educational level, residence type, perception of intimate partner violence, material standard of living, HIV/AIDS prevention knowledge, HIV/AIDS transmission knowledge, employment type, knowledge of where to obtain a condom, HIV/AIDS attitudes, exposure to HIV/AIDS information and knowing someone who has/has died of AIDS. Results of the analysis are presented in table 5.1 below.

Four out of the twelve variables were significantly associated with sexual risk. The variables were: age, perception of intimate partner violence and material standard of living, educational level. A fifth variable: knowing someone who has/has died of AIDS was at the borderline of significance. Age with a correlation coefficient of (-.219) had the strongest correlation with sexual risk. The correlation was however inverse, revealing that sexual risk decreases with increase in age. Results show that for every increase in age, sexual risk decreases by approximately one-tenth of a unit (-.134 and -.061 at 95%CI) in the sexual risk scale. This observation is in agreement with findings from other studies, confirming that the likelihood of indulgence in risky sexual behavior decreases with increase in age.
Table 5.5: Results of Regression Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>S.E</th>
<th>Beta</th>
<th>Sig</th>
<th>Confidence Interval Lower</th>
<th>Higher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.098</td>
<td>.019</td>
<td>-.219</td>
<td>.000</td>
<td>-.134</td>
<td>-.061</td>
</tr>
<tr>
<td>Educational Level</td>
<td>-.268</td>
<td>.084</td>
<td>-.140</td>
<td>.002</td>
<td>-.433</td>
<td>-.102</td>
</tr>
<tr>
<td>Material Standard of Living</td>
<td>-.088</td>
<td>.024</td>
<td>-.151</td>
<td>.000</td>
<td>-.136</td>
<td>-.040</td>
</tr>
<tr>
<td>Perception of Intimate Partner Violence</td>
<td>-.054</td>
<td>.024</td>
<td>-.089</td>
<td>.027</td>
<td>-.101</td>
<td>-.006</td>
</tr>
<tr>
<td>Residence Type</td>
<td>.054</td>
<td>.087</td>
<td>.025</td>
<td>.533</td>
<td>-.117</td>
<td>.226</td>
</tr>
<tr>
<td>Employment Type</td>
<td>.033</td>
<td>.041</td>
<td>.034</td>
<td>.411</td>
<td>-.046</td>
<td>.113</td>
</tr>
<tr>
<td>Knows where to get a Male Condom</td>
<td>.069</td>
<td>.091</td>
<td>.032</td>
<td>.445</td>
<td>-.109</td>
<td>.248</td>
</tr>
<tr>
<td>HIV/AIDS Prevention Knowledge</td>
<td>-.016</td>
<td>.024</td>
<td>-.033</td>
<td>.503</td>
<td>-.062</td>
<td>.031</td>
</tr>
<tr>
<td>HIV/AIDS Transmission Knowledge</td>
<td>-.003</td>
<td>.042</td>
<td>-.003</td>
<td>.945</td>
<td>-.085</td>
<td>.080</td>
</tr>
<tr>
<td>HIV/AIDS Attitudes</td>
<td>-.029</td>
<td>.034</td>
<td>-.033</td>
<td>.402</td>
<td>-.096</td>
<td>.039</td>
</tr>
<tr>
<td>Exposure to HIV/AIDS Information</td>
<td>.035</td>
<td>.037</td>
<td>.039</td>
<td>.338</td>
<td>-.037</td>
<td>.107</td>
</tr>
<tr>
<td>Knows Someone who has/has died of AIDS</td>
<td>-.162</td>
<td>.085</td>
<td>-.075</td>
<td>.057</td>
<td>-.329</td>
<td>.005</td>
</tr>
<tr>
<td>Constant</td>
<td>5.31</td>
<td>.476</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Material standard of living, which is regarded as an indicator of socio-economic status, emerged as the next strongest predictor (correlation coefficient = -.151) of sexual risk. Results reveal that for every increase in material standard of living, sexual risk also decreases by approximately one-tenth of a unit in the sexual risk scale. These results show that young women are more likely to avoid risky sexual behaviors if they are more socially and financially privileged. Although there are strong speculations about the association between poverty and vulnerability to HIV/AIDS infection, not many studies have investigated the association between socio-economic status and sexual risk taking in young people. This finding provides empirical evidence in support of this speculation.
Educational level, with a correlation coefficient of -.140, also appeared to be an important predictor of sexual risk. Results reveal that for every increase in educational level, sexual risk decreases by approximately one-quarter of a unit in the sexual risk scale. This is the highest amount of change exerted by any independent variable on sexual risk. This finding affirms the conclusions made about the relationship between sexual risk and educational level in previous studies carried on this topic. It reveals the importance of education and the relative effects of its deficiency on sexual risk taking in young women.

Perception of intimate partner violence was also found to be indirectly associated with sexual risk. Results indicate that for every increase in the perception scale, sexual risk increases by one-twentieth of a unit. The significance of this relationship is better understood when its implications are considered. The most important implication of this finding is that the higher the approval of intimate partner violence the higher the likelihood of sexual risk taking. There is currently no empirical evidence on the association between perception of intimate partner violence and sexual risk taking in young people. This finding therefore, provides new evidence about the influence of a societal norm on sexual behavior of young people.

These results indicate that socio-demographic, HIV/AIDS awareness and empowerment indicators all exert significant influences on the sexual behavior of young unmarried women in Nigeria. Socio-demographic factors may play more roles in determining sexual risk. In summary, this analysis reveals that age, material standard of living, perception of intimate partner violence and educational level are the most important predictors of sexual risk taking in young unmarried women in Nigeria.
CHAPTER SIX
Discussion of Results and Recommendations

Young women in Nigeria remain the most affected population by the HIV epidemic, hence, the need for understanding the antecedents of their vulnerability to the infection is considered a priority. A comprehensive study of the factors that predispose young women to the HIV/AIDS infection is a major step towards this goal. This study was an exploratory research analysis aimed at examining the influence of HIV/AIDS related risk factors on the sexual behavior of young women aged 15-24 in Nigeria. Making use of the National Demographic and Health survey this study was able to provide a comprehensive explanation of some of the antecedents of sexual risk-taking among young women in the country. Findings from analysis carried out reveal that the sexual behavior of unmarried Nigerian women aged 15-24 are significantly influenced by socio-demographic factors, HIV/AIDS awareness and female empowerment.

Almost all the independent variables were significantly associated with age at first sex. Condom use at first sex was significantly associated with fewer variables, most of them socio-demographic variables. This indicates that the likelihood that young women used condoms during their first sexual encounter was largely a function of the contexts in which they live in. Fewer socio-demographic variables were significantly
associated with condom use at last sex, indicating the decline in the importance of contextual factors on condom use. HIV/AIDS awareness variables were significantly associated with condom use at last sex. Young women may have started using condoms because of their increased exposure to HIV/AIDS information and awareness of the impact of the epidemic in the country.

Most importantly, all the empowerment indicators were significantly associated with condom use at last sex. This provides evidence that young women can make positive sexual health choices if they are more empowered. Recent sexual activity was only significantly associated with two variables: knowing someone who has/has died of AIDS and discussing family planning methods with friends. This finding provides evidence of the influence of communication and social interaction on the sexual behavior of young women.

The most important predictors of sexual risk were determined through the multivariate analysis. Age, educational level, material standard of living and perception of intimate partner violence emerged as the most important predictors of HIV/AIDS risk in young women. These findings affirm results from previous research on similar topics in countries in sub-Saharan Africa. Results from bivariate analyses revealed that women who are more educated, have greater HIV/AIDS awareness and disapprove of intimate partner violence are more likely to be sexually active. However, among those who are sexually active, the less socially, financially, and educationally empowered are at greater risk of HIV/AIDS.

These findings suggest that the women who are at greatest risk of exposure to HIV/AIDS fall in somewhere in between the poor and the rich. Geographically, these
women can either be found in townships (rural areas that have undergone some social, infrastructural and economic transformation), or in the poorer parts of urban areas. Based on findings from this study, these women are more likely to live in urban areas. In urban places in Nigeria, these group of women will most likely live in slums or parts of town that have minimal access to basic social amenities. Many of them emigrate from rural areas, usually in search of employment and possibly for social and financial emancipation and independence. With only secondary or as little as primary education and virtually no financial wealth these women are faced with the enormous challenge of making a living and ultimately surviving on meager resources. Many of them are unable to find jobs because of limited employment opportunities in the urban areas. As a result they are forced to engage in marginal often-menial occupations to survive (Ajuwon and Shokunbi, 1997). Lack of substantial social and financial support from family and kin members further complicates their situation, leaving them virtually financially disenfranchised.

Recent population health research examining the determinants of the health of young people in a global context point out that increased female rural to urban migration is not only common in Nigeria but has been observed in many developing countries throughout the world. Statistics from the World Bank show that countries in sub-Saharan Africa have witnessed the highest rate of urbanization with the last two decades. Young women between the ages of 18-24 make up a large proportion of immigrants who move from rural areas to urban areas in search for employment (Blum and Nelson-Mmari, 2004).
Blum and Nelson-Mmari (2004) state that due to lack of employment and poverty in the urban areas, these women are exposed to many health risks such as violence, substance abuse, prostitution, and sexually transmitted diseases. In Nigeria, some of these women resort to prostitution or decide to engage in different types of transactional sex (usually with older men) to survive (Bamgbose, 2002). Prostitution is illegal in Nigeria but statistics show that there are more than one million prostitutes in the country (Avert.org, 2005). Most of these sexual unions occur under unsafe conditions, in which the women are unable to negotiate condom use. This undoubtedly exposes them to many adverse reproductive health outcomes, among which HIV/AIDS is the most likely. Prostitution has been implicated as major factor that has facilitated the rapid progression of the HIV/AIDS epidemic in sub-Saharan Africa. Within the last decade, many urban areas in sub-Saharan Africa have witnessed increases in the numbers of women involved in prostitution. A consequence of this is the increase in HIV/AIDS prevalence rates in urban areas.

Another risky occupation that these women maybe tempted to engage in is petty trading or street hawking. Both activities involve the sale of miscellaneous items either from a roadside stand or from a tray usually balanced on the head. Although this form of trade is lucrative and readily provides needed monetary resources, there are concerns that it exposes young women to the risks of contracting HIV/AIDS. Because of the flexibility of their activities and because of the lack of social protection laws, these women are unduly exposed to the risks of gender based violence and sexual exploitation in the form of rape. It is not uncommon for male customers to solicit sex from these
women. It is possible that these women because of their low literary status, fear, and poverty fall prey to men.

Several studies carried out in countries in sub-Saharan Africa provide evidence for the prevalence of sexual exploitation of female itinerant hawkers (Fawole et al., 2003; Orubuloye et al., 1993; Nzewi, 1988; Ebigbo, 2003; Pick et al., 2002; Plus News, 2004 and Anafi et al., 1997). In Orubuloye’s study (1993), 90% of the female hawkers surveyed acknowledged that men, passengers in vehicles and drivers often made sexual suggestive advances to them, while 7% of the women street vendors in Johannesburg and 36.3% of female hawkers in motor parks in two motor parks in South-Western Nigeria reported that they had been sexually harassed (Pick et al., 2002; Orubuloye et al., 1993; Fawole et al., 2003). In a study carried out by Ebigbo and Abaga (1990) on the sexual experience of street trading girls in a city in Nigeria, 50% of the hawkers acknowledged having sexual intercourse whilst hawking (Ebigbo and Abaga, 1990). Half of the female hawkers who reported sexual advances by men in a motor park in Ibadan disclosed that they had sex with men who were not their husbands or boyfriends as a result of the sexual overtures (Orubuloye et al., 1993). Other forms of sexual harassment encountered by hawkers include unwanted touching of body parts, “exposure to pornographic pictures in magazines, or pornographic video films or the sexual organs of their would be assailants” (Egibo and Abaga, 1990).

Although data on the prevalence of this activity is scanty, there is no doubt that such sexual activity increases the chances of HIV infection in female itinerant hawkers. This study found that a majority (176 out of 474) of the young women who are employed work as sales women, shop assistants or street vendors. Almost half (49.4%)
of them live in urban areas. Analysis revealed that they are more than two times more likely than their counterparts in eleven other professions to have had sex a few weeks prior to the interview. Although this does not provide enough information about the sexual behavior of these women, it is an indication of the level of exposure they have to sexual encounters. Unfortunately, the conditions under which these sexual unions occurred are unknown. It is possible that some of the women were sexually exploited through rape or they may have engaged in transactional sex for financial reasons. There is also a possibility that they had sex with their boyfriends. In any case it is important to recognize that young women who are involved in itinerant hawking either in the urban or rural areas are at high risk of contracting HIV/AIDS.

Other possible vocations these women can be found in are hairdressing and sewing in which they work mostly as apprentices. Again these occupations are relatively lucrative however; there is strong speculation that female apprentices face undue sexual pressure, which undoubtedly exposes them to the risks of contracting HIV/AIDS. A study conducted by Ajuwon et al. (2002) among female apprentice tailors in Ibadan, the second largest city in Nigeria provides evidence in support of this observation. Their study, which included women between the ages of 15-25 revealed that more than half (53%) of them had had sex.

Among them, 21% acknowledged having exchanged sex for money or gifts and 42% indicated that they had received unwanted touching, 55(18%) acknowledged that they experienced attempted rape in the last six months, while 11(4%) disclosed that there were raped within the last six months prior to the interview. These figures suggest that women who are involved in such apprentice jobs are targets for sexual exploitation.
Results from this study reveal that majority (75.9%) of the women who indicated they are employed as hairdressers live in urban areas, more than half (52.2%) of those employed as tailors live in the urban areas too. The position of the women in these professions are not known, however, since they are all unmarried and below the age of 24, it is possible that majority of them are apprentices. Analysis revealed that 12% of the women in both vocations had sex a few weeks prior to the interview. This percentage is second to that of women involved in agriculture (22%) and third to that of women employed as sales assistants, or street vendors (33.3%), revealing that they are more likely than their counterparts who are employed in other professions and those not employed to have had recent sex. Again, nothing is known about the circumstances under which these sexual unions took place, regardless, current evidence supports the speculation that these women may be victims of some aspects of sexual exploitation or engage in transactional sex for financial reasons.

An important factor that may further predispose women who are less financially privileged in urban areas to sexual risk is the fact that they have little or no education. The majority of the women employed as tailors, hairdressers and sales assistants in this study only have secondary education. A major consequence of this deficit is lack of or limited knowledge about sexuality and HIV/AIDS. The fact that these women are out of school means that they are not exposed to formal HIV/AIDS education provided through the school curriculum. If any of them did not attend secondary school it means that they may not have been exposed to any formal sexuality or HIV/AIDS education. Although they are exposed to HIV/AIDS information disseminated through the mass media, these women are more likely to have
misconceptions about the HIV/AIDS infection, which unquestionably exposes them to the risks of contracting the disease.

Another factor that increases women’s vulnerability to sexual risk is their perception of intimate partner violence. Results reveal that young women who accept intimate partner violence are more likely to engage in sexual risk behaviors. Slightly more than half (52.5%) of the women who live in the rural areas compared to less than half (47.5%) of those who live in urban areas think intimate partner violence (wife beating) is unjustified in any circumstance. Since approval of intimate partner violence emerged alongside lower educational level and lower material standard of living as the major predictors of sexual risk in young women, it is possible that the young women who are at high risk of the infection find intimate partner violence acceptable. This provides more insight into the contexts in which some of their sexual relationships occur and hence, further confirmation about their increased exposure to HIV/AIDS risk.

These findings generally suggest that young unmarried women who live in urban slums or townships in Nigeria are at great risk of contracting HIV/AIDS through risky sexual behaviors. It is therefore pertinent that these women be reached through specially designed programs that will address the many factors that contribute to increasing their risk to the infection.

6.1 Implications of Findings

Findings from this study have several implications. Two major implications from these findings are discussed below.
1. HIV/AIDS awareness is not a major predictor of HIV/AIDS sexual risk. This finding is quite surprising and contests the speculation that HIV/AIDS awareness plays a key role in determining sexual behavior in young people in countries in sub-Saharan Africa. This finding also corroborates that of Onah et al. (2004), which revealed that adequate knowledge of the HIV/AIDS was not correlated with sexual behavior of undergraduate students in Nigeria. Although evident at the bivariate level, the influence of HIV/AIDS awareness on sexual behavior was not significant when the influence of other variables (mostly demographic and socio-cultural) were considered. This observation supports increasing speculation and evidence that contextual factors play more crucial roles in determining levels of risk in young people.

2. Another issue this study exposes is the possibility that a considerable proportion of HIV/AIDS infections that occur in the country are not transmitted by sexual contact. This raises speculation about other non-youth based sexual avenues for the spread of the HIV/AIDS infection in the country. There is increasing evidence that other non-sexual avenues of transmission maybe responsible for a considerable proportion of the HIV infections in sub-Saharan Africa. The speculation is supported by studies carried out by Gisselquist et al. (2002) and Djukpen (2003), which provide empirical evidence about the prevalence of other non-sexual avenues for the spread of the HIV/AIDS infection in sub-Saharan Africa and in Nigeria respectively. It is therefore important that careful investigation be carried out to determine the relative proportion of HIV infections that occur through non-sexual means.
6.2 Limitations of the Study

There are several limitations to this study. The most evident and important limitations are those created as a result of the nature of the NDHS study/dataset as well as the inconsistencies and paucity in the data set.

1. The focus/nature of the NDHS study/dataset

The current study was aimed at examining the influence of several risk factors on the sexual behavior of young unmarried women in Nigeria. This study was unable to explore the influence of a broad range of indicators for some identified (socio-environmental, socio-cultural) factors because indicators measuring those factors were not in the data set. In cases where they were, they could not be incorporated into the research framework. The NDHS was primarily designed for the collection of population and health related data on maternal and child health, HIV/AIDS sexually transmitted infections, and reproductive and health nutrition. Although this survey also collects population data, not many variables measuring environmental, cultural and family related indicators were included in the study. Additionally, it would have been ideal to examine the influence of HIV/AIDS risk factors on more sexual behaviors such as: number of sexual partners and attitudes to sexual behavior; unfortunately, these behaviors were not surveyed. The lack of some of the desired variables prevented this study from providing a comprehensive exploration of the factors that determine sexual behavior in young unmarried women aged 15-24 in Nigeria.

2. Missing Data
This study was unable to make use of a broader range of variables for analysis because of inconsistencies in the data set. The inconsistencies were mostly in the form of missing data. Some variables had more than half of the total observations missing. To avoid a biased analysis and misinterpretation of findings from the analysis these variables were not included in the study. This inadvertently reduced the number of variables eligible for inclusion in the study, thereby limiting the scope of the study itself.

3. Limitations Associated with Cross-sectional Studies

This study shares limitations with other cross-sectional studies. One of the major limitations of these types of studies is recall bias. Cross-sectional studies usually collect information about current and past events through the administration of a survey instrument. Answers to survey questions are primarily based on the ability of the study subjects to remember what they did in the past, in some cases respondents are unable to remember what happened in recent history in their lives. Some of the questions asked in the NDHS study had to do with activities that took place about a decade ago. The inability of the study subjects to remember accurately and provide correct answers to the questions asked may therefore bias the survey findings.

This study was also affected by the limitations caused by reporting and measuring bias. An important limitation of this study stems from a type of reporting bias that has to do with the observation that women are usually prone to underestimate and underreport their sexual activities. This problem may have even been aggravated by the fact that the questionnaires were administered through interviews consequently...
creating opportunity for the respondents to further underreport their sexual activities. This pattern undoubtedly makes the study and explanation of determinants of sexual behavior daunting. Another limitation of cross-sectional studies is the fact that they are only able to provide an account of what exists at any given period of time (Ekeh, 1997). Both the dependent variable (sexual behavior) and its predictors are surveyed at the same time. As a result it is difficult to determine causality.

4. Representation of Study Findings

Although the dataset used for the study encompassed the entire nation, findings from analysis cannot be regarded as representative of the entire population of young unmarried women aged 15-24 in Nigeria. This is primarily because only 1/5 of the ethnic groups in Nigeria were captured in this study. It is difficult to make generalizations to the entire population since majority of the people groups in the country were not captured in this study.

6.3 Further Research

Despite the limitations faced, this study provides a wealth of information about the factors that influence the sexual behavior of young unmarried women in Nigeria. As an ecologic study, it examined the influence of three different types of factors: socio-demographic, empowerment and HIV/AIDS awareness on selected sexual behaviors of young women. Results from analysis carried out reveal that socio-economic status, HIV/AIDS prevention knowledge and a socio-cultural norm – perception of intimate partner violence influence the sexual behavior of young women. These are a few risk
factors that play roles in shaping sexual behavioral patterns in young people. In an attempt to provide a more comprehensive explanation of the context of sexual behavior in young women and young people in general in Nigeria, the following research topics should be explored:

1. **The influence of socio-cultural, socio-environmental and family related factors on the sexual behaviors of young women.**

   Prior studies carried out in other countries in sub-Saharan Africa disclose that these factors play important roles in determining sexual behaviors of young people. Very little information currently exists on the link between these factors and observed sexual behavioral patterns of young people in Nigeria. Studies that explore these relationships will enhance the understanding of the factors that predispose young people to undesirable sexual behaviors and the HIV/AIDS infection. The findings will also provide needed information for the planning of appropriate intervention strategies.

2. **Characteristics and patterns of positive sexual behavior and its correlates in young people.**

   Data from the NDHS shows that the majority (1202) 65.5% of the young unmarried women aged 15-24 are not sexually active. This suggests that a considerable proportion of young women are possibly abstaining from sexual relations. Future studies should be aimed at understanding the reasons why as well as the context under which such decision and behavior thrives. Future studies should also aim at investigating the possible protective factors of risky sexual behavior in young women.
A lot of attention has been focused on the negative factors associated with sexual behavior of young women. Findings from studies carried out so far reveal norms, activities and systems that need to be changed for the purpose of combating undesirable sexual behavioral patterns. Very little attention has been focused on identifying the factors associated with positive and safe sexual behaviors in young people. Findings from such studies will provide information about aspects of the community, individuals, the socio-political, socio-cultural and health systems that support and nurture positive sexual behavior in young people. A good understanding of these factors will equally assist with the design and implementation of more appropriate intervention programs.

3. The factors associated with the sexual behaviors of young unmarried boys.

The majority of studies investigating the factors associated with sexual risk among youth in Nigeria have been focused on one gender – females. A reason for this pattern could be because young women have been most affected by the HIV/AIDS epidemic and continue to be the most likely victims of adverse reproductive health outcomes. For some reason, the fact that the sexual behaviors of young women are largely linked to and dependent on the sexual preferences of their male counterparts is often overlooked.

In an attempt to provide a more comprehensive and well grounded explanation of the context in which sexual behaviors of young women (as well as young men) occur, the factors that influence the sexual behavioral patterns of young males (their sexual counterparts) in Nigeria needs to be explored. Research results from the studies will not only help in providing necessary information on factors that expose women to undesirable sexual behaviors but also will supply needed information about the context
of sexual risk taking in unmarried males. Collectively, these findings will provide more information for HIV/AIDS intervention programming in Nigeria.

4. Sexual behavioral patterns of minority ethnic populations.

Although this study made use of a nationally representative sample, not all the ethnic groups in the country were represented. Only fifty-six ethnic groups were represented in the sample. This is only 1/5 of the total ethnic group make up of Nigeria. Many of the ethnic groups included are the largest and most prominent. Most of the studies on HIV/AIDS related risk behaviors also capture these ethnic groups. A consequence of this pattern is that very little is still known about the risk behaviors of members of minority ethnic populations in Nigeria. As the HIV/AIDS advances rapidly in the country despite intervention efforts, there is an imminent need to include such populations in further studies. Further research efforts should therefore be aimed specifically at investigating sexual behaviors in minority ethnic populations.

6.4 Recommendations for HIV/AIDS Intervention Programming

This study revealed that the sexual behaviors of young women are strongly influenced by individual as well as contextual factors. Results from analysis therefore suggest the need for different types of intervention programs. Findings from this study have implications for HIV/AIDS information, education and communication (IEC) programming as well as community-based (contextual) interventions. In an attempt to address and diminish the complexities of the vulnerabilities associated with the sexual behavior of young unmarried women in Nigeria and in the long run curb
the progression of the epidemic in this population, the following recommendations for HIV/AIDS intervention programming should be considered.

6.4.1 Information, Education and Communication (IEC) Programs

1. Develop and disseminate more detailed and comprehensive HIV/AIDS education materials and informational programs.

These informational and educational materials and activities should contain detailed information on how the HIV infection can be transmitted and prevented. The current situation (number of people affected, number who become infected everyday, and the odds of becoming infected) of the epidemic in the nation should also be communicated. Materials and programs that contain more detailed information on how the infection can be prevented and transmitted will also help dispel the widespread misconceptions about the disease. These materials can be made available through educational resource centers or libraries designed specifically for young people.

One of the major findings from this study is that young women do not have adequate knowledge about the HIV/AIDS infection. This finding apart from affirming the observation made in previous studies carried out in the country, confirms the need to strengthen efforts geared towards educating young people about the disease. One of the barriers faced in achieving this is the lack of educational resource centers for young people. An educational resource center will serve as a library where young people can visit to specifically learn more about the HIV/AIDS disease. Information about other health issues affecting young people can also be provided at such centers.
2. HIV/AIDS education should be designed specifically for and targeted to all educational levels namely: primary, secondary and tertiary levels.

   Most of the HIV/AIDS education programs have been focused at the secondary school level as a result, based on the findings from this study, secondary school women have greater HIV/AIDS prevention and transmission knowledge. This study found that all young women in both primary and tertiary institutions are equally at risk of the infection and are in need of more information about the disease.

3. Expand sexuality education in schools.

   Sexuality education provided in schools should be made more comprehensive. The current sexuality curriculum should be expanded to incorporate the findings from research studies about factors that affect adolescent sexuality in Nigeria as well as to address some societal norms that adversely affect young people's sexual behaviors. For example, sexuality education should include abstinence alongside other contraceptive options as a safe sex practice. Findings from this study reveal that the age at which young women become sexually active is highly correlated with other sexual behaviors. The associations are indirect, revealing that young women who delay sexual activity are more likely to use condoms during their first and last sexual encounters. They are also less likely to have had sex a few weeks prior to the interview. Young people need to be encouraged to practice abstinence, which is the cheapest and most reliable safe sex option. Delaying sexual involvement until marriage will decrease their vulnerability to numerous adverse reproductive health outcomes of which HIV/AIDS is one.

   In addition, sexuality education should also be expanded to include topics related to female sexual and reproductive health rights. Addressing this issue will not
only help to enlighten young women about the rights they have over their bodies but will also educate young boys about the adverse effects of male sexual aggressiveness and physical abuse of women. This enlightenment will serve as a stepping-stone towards the abolition of the widespread norms about intimate partner violence.

Furthermore, sexuality education should be taught in primary schools, at least in primary six. Currently, sexuality education starts in secondary school; primary school pupils are usually not taught about sexual and reproductive health. Although there are cogent reasons for this arrangement, it is important to mention that some young people especially in the rural areas are being left behind. A major reason being, because some primary school pupils especially in the rural areas are teenagers and therefore need to know about their sexuality. Additionally, this study found that some young women in primary school are sexually active and as a result need information on how to protect themselves from the risks of contracting HIV/AIDS infection. Sexuality education at this level should focus on encouraging and empowering young girls to delay sexual initiation until marriage. More importantly, a handful of women in the rural areas do not continue their education beyond the primary school level. Some of them get married or are enrolled in vocational training programs after primary school. An important consequence of this is that they may never be exposed to any standard education and information about their sexuality and reproductive health, which undoubtedly increases their vulnerability to adverse sexual behaviors. The extension of sexuality education to primary schools will go a long way to reduce young women’s vulnerability to the risks of sexually transmitted diseases.

4. Develop educational programs and materials to specifically target out of school youth.
Out of school youth include: young people without any formal education, young people with special education needs who are not enrolled in school, school drop outs, young people involved in trade and apprenticeship and young people who are employed. Although data used for this study show that a small proportion of young women have no education and that the majority (72%) of them is not employed, it is important to mention that a large fraction of Nigeria’s youth is not enrolled in any educational institution. These youngsters may fall into any of the categories mentioned above. Each of these groups has their own unique characteristics and educational needs. Methods of communicating information also differ across these groups. It is imperative that HIV/AIDS information and educational programs and materials be designed specifically to reach these groups especially those who are more exposed to the risk of HIV/AIDS infection by reason of their activities for example young women employed as sale assistants and street vendors. Analysis carried out in this study revealed that a sizeable proportion of the young women who work as sales assistants are sexually active and hence are at risk of contracting HIV/AIDS.

6.4.2 Community-Based/Contextual Interventions

1. Establish skill-building programs for young women.

The need for young women to be economically and empowered cannot be overemphasized. This study found that women who belonged to the lower level of the socio-economic ladder were more likely to engage in risky sexual behaviors. Prior studies also highlighted the link between financial disenfranchisement and risky sexual
behavior. In many communities in sub-Saharan Africa (including Nigeria), some young women are known to exchange sex for financial favors. This practice has been blamed for increasing young women’s vulnerability to HIV/AIDS infection. Findings from this study confirm the need for the establishment of more workshops and training programs/centers that teach young women vocational skills. These facilities need to be set up in every locality and made affordable and accessible to young women especially those residing in rural areas. HIV/AIDS education should also been incorporated into the various vocational training programs.

In addition, there is also a need for young people (males and females) to be taught other life skills. These are skills that enhance young people’s ability to make responsible and healthier choices, resist and avoid risk environments and behaviors (Moya 2002). These skills basically enable young people “make wise decision’s, think creatively and critically, clarify and analyze values, communicate, including listen, build empathy, be assertive, and negotiate, cope with emotions and stress, feel empathy with others and be self-aware” (UNICEF, 2000, In Moya, 2002 p.1). There is evidence that such programs are effective in improving the sexual health of young people. 

2. Establish adolescent focused health and counseling centers.

Young people encounter various barriers in accessing health care. Limited access to health care facilities has been implicated as a factor that contributes to the odds of engaging in risky sexual behavior. Findings from this study revealed that not knowing where to obtain condoms contributes to risky sexual behavior. In an attempt to eliminate the barriers and address the limitations young people face with accessing health care, health centers that primarily cater for the medical needs of young people need to be set
up. At such centers young people will be able to receive needed appropriate medical attention and help, ask questions and obtain information about sexuality and contraception in a non-threatening environment.

3. Address intimate partner violence.

This study discloses that acceptance of intimate partner violence in the form of wife beating is widespread among young women. Interestingly, acceptance of intimate partner violence was found to be significantly associated with sexual risk taking in young women. It is possible that young women who accept some aspects of intimate partner violence are more vulnerable to coerced sex. This norm needs to be obliterated. This will require a concerted effort by the government, non-governmental organizations, community-based organizations, faith-based organization, community leaders, and the entire community. Efforts should be centered on education and advocacy. The general public needs to be educated about the effects of such norms on the health and wellbeing of women as well as on the entire family unit, which makes up the community. There needs to be continuous advocacy for women’s rights. Advocacy and education should take place at all fronts, in all segments of the community namely, religious centers, schools, market places and community gatherings using culturally appropriate means of communication. Possible avenues of communication are drama and mass media. Plays and short skits that illustrate the various consequences of wife beating or types of intimate partner abuse can be presented by youth drama teams at all the arenas mentioned above. Movies and true-life documentaries about the lives of women who have been abused by their husbands should also be produced and
distributed. The latter may be more effective in reaching majority of the population, primarily because of Nigeria's growing movie industry. A striking feature of this industry is that it has a large audience; these movies are favorites in all parts of the country and in many families. Produced in different languages, these movies are designed to capture the daily lives of Nigerians interweaving comedy with horror, history and moral tutoring. These movies are particularly credited for exposing ills inherent in the community and usually end with a moral lesson. A large number of them tell love stories and reenact family dynamics. The author is unaware of any study that has examined the effect of the messages passed across through these movies on the behavior of its viewers. However, it is noteworthy to mention that these movies are well accepted in the community and are in no doubt a fertile ground for disseminating information on issues regarding intimate partner violence. It is also of the essence to mention that these movies have found their way outside the borders of country and are rapidly saturating the movies markets in other countries in sub-Saharan Africa especially West Africa. Viewers in those countries find these movies very entertaining as well, despite cultural and language differences. It is therefore important to mention that the movies or documentaries specifically designed to address issues pertaining to intimate partner violence will help eradicate the abuse of women not only in Nigeria but also in other countries in Africa where such dehumanizing beliefs are widespread.

4. Improve access to basic social amenities in the community.

This study found that young women living in homes without basic household facilities like electricity, television, car, radio, etc are more likely to engage in risky
sexual behavior. This finding confirms the link between low socio-economic status and poverty and vulnerability to the HIV/AIDS infection. In an attempt to improve the economic and social status of populations, basic social amenities like pipe borne water, electricity, transportation, access to mass media and educational facilities should be made priority community development projects. The availability of some of these amenities will undoubtedly help improve access to HIV/AIDS information disseminated in the community.

5. Enforce policies that support mandatory education for all young women in the country.

Analysis carried out in this study revealed that education is a major predictor of HIV/AIDS risk in young women. Interestingly, results revealed that sexual risk reduced considerably with increase in level of education. Making education mandatory for all girls will easily and readily reduce young women's vulnerability to the HIV/AIDS infection.

In an attempt to provide more detailed information on how these recommendations can help reduce young people's risk to the HIV/AIDS infection, two flow chats (logic models) depicting, in chronological order the effect of identified interventions/actions are presented in figures 6.1 and 6.2. Each model (in a concise format) identifies the major activities that need to be carried out for each recommendation, the indicators of success of the action taken and the resultant behaviors impacted. Some of these recommendations are in lieu with ongoing intervention efforts in the country. Findings from this study, therefore, provide additional validation for the theoretical basis of these interventions.
Most importantly, in an attempt to obtain maximum effectiveness, these programs should be designed specifically to fit target communities appropriately. It is hoped that timely and appropriate implementation of such research-based recommendations will go a long way to help in reversing the progression of the HIV/AIDS epidemic in Nigeria.
Figure 6.1: A Logic Model Illustrating the Impact of Information, Education and Communication (IEC) Programs aimed at Reducing Young People’s Risk to the HIV/AIDS Infection

Information, Education and Communication Programs

- More comprehensive HIV/AIDS education materials and informational programs
- Incorporate HIV/AIDS education into all educational levels namely: primary, secondary and tertiary levels
  - Extend HIV/AIDS programs to out of school youth
- Expand Sexuality Education in Schools
- Establish resource centers for adolescents

Activities

- Prepare and distribute HIV/AIDS pamphlets, brochures etc. that contain clear information about HIV prevention and transmission
- Establish HIV/AIDS peer education clubs
- Include HIV education in school curriculum
- Community outreach programs/outreachs
- Introduce reproductive health education in primary schools
  - Encourage abstinence as a contraceptive option
- Libraries, access to Internet games, and puzzles

Individual Indicators/Determinants

- Improve HIV prevention and transmission knowledge
- Increase HIV/AIDS awareness among youth
  - Create opportunity for youth to get involved in HIV intervention
- Increase young people’s knowledge about safe sex practices
  - Reduce frequency of sex

Behaviors

- Delay sexual initiation until marriage
- Increased use of contraceptives
  - Reduction in number of sexual partners

Goal

Reduce Risk to HIV/AIDS Infection
Figure 6.2: A Logic Model Illustrating the Impact of Community-based/Contextual Interventions aimed at Reducing Young People’s Risk to the HIV/AIDS Infection

**Community-based Interventions**

- Establish skill building training programs and workshops
- Provide life skills education for young people
- Establish Adolescent focused health centers
- Address intimate partner violence

**Activities**

- Teach young girls: sewing, hairdressing, baking, craft making, entrepreneur and secretarial skills etc.
- Incorporate into school curriculum
- Conferences/workshops
- Involve parents
- Free HIV testing and counseling
- Access to medical and contraceptive information
- Documentaries/movies
  - Drama/skits in community arenas
  - Establish policies

**Individual Indicators/Determinants**

- Improve young women’s empowerment and economic independence
- Improve young people’s ability to make wise decisions
- Increase self esteem in youth
- Increase self efficacy in youth
- Increase utilization of medical and counseling facilities
- Improves youth knowledge of contraceptives
- Reduction of male aggressiveness and physical abuse on women
- Equity in gender power in relationships

**Behaviors**

- Reduction in the incidence of transactional sex
- Reduction in number of sexual partners
- Delay sexual initiation until marriage
- Increased use of contraceptives

**Goal**

Reduce Risk to HIV/AIDS Infection
Figure 6.3 A Logic Model Illustrating the Impact of Community-based/Contextual Interventions aimed at Reducing Young People’s Risk to the HIV/AIDS Infection Contd'

Community-based Interventions

- Improve access to basic social amenities in the community

Activities

- Install pipe borne water, electricity, transportation, access to mass media and educational facilities in rural communities

Individual Indicators/Determinants

- Improve access to HIV/AIDS information
- Improve socio-economic status

Behaviors

- Reduction in the incidence of transactional sex
- Delay sexual initiation until marriage
- Increased use of contraceptives
- Reduction in number of sexual partners

Goal

- Reduce Risk to HIV/AIDS Infection
6.5 Conclusion

This study provides a wealth of information about the determinants of sexual risk taking in young unmarried women ages 15-24 in Nigeria. Unlike other studies conducted thus far on this topic, this study provided an explanation of the antecedents of sexual risk-taking among women in the entire country. Findings from this study affirm those made by other researchers about the socio-demographic and structural antecedents of the sexual behavior of young people. However, in addition, it provides one of the first empirical evidence about the effect of socio-cultural norms on the sexual behavior of young unmarried women in Nigeria. Young women who are emerging into Nigeria’s middle and upper classes as indicated by education and socioeconomic status are at great risk for risk sex. Identification of these non-traditional target groups indicates the need to redirect existing AIDS intervention resources.

As discussed in the preceding section, findings from this study have vital implications for HIV/AIDS intervention programming. Since Nigeria has the highest number of young people aged 10-24 in sub-Saharan Africa, timely and appropriate implementation of these research-based suggestions in Nigeria will aid the reversal of the HIV/AIDS epidemic not only in Nigeria but also in much of the youth population of sub-Saharan Africa.
References


