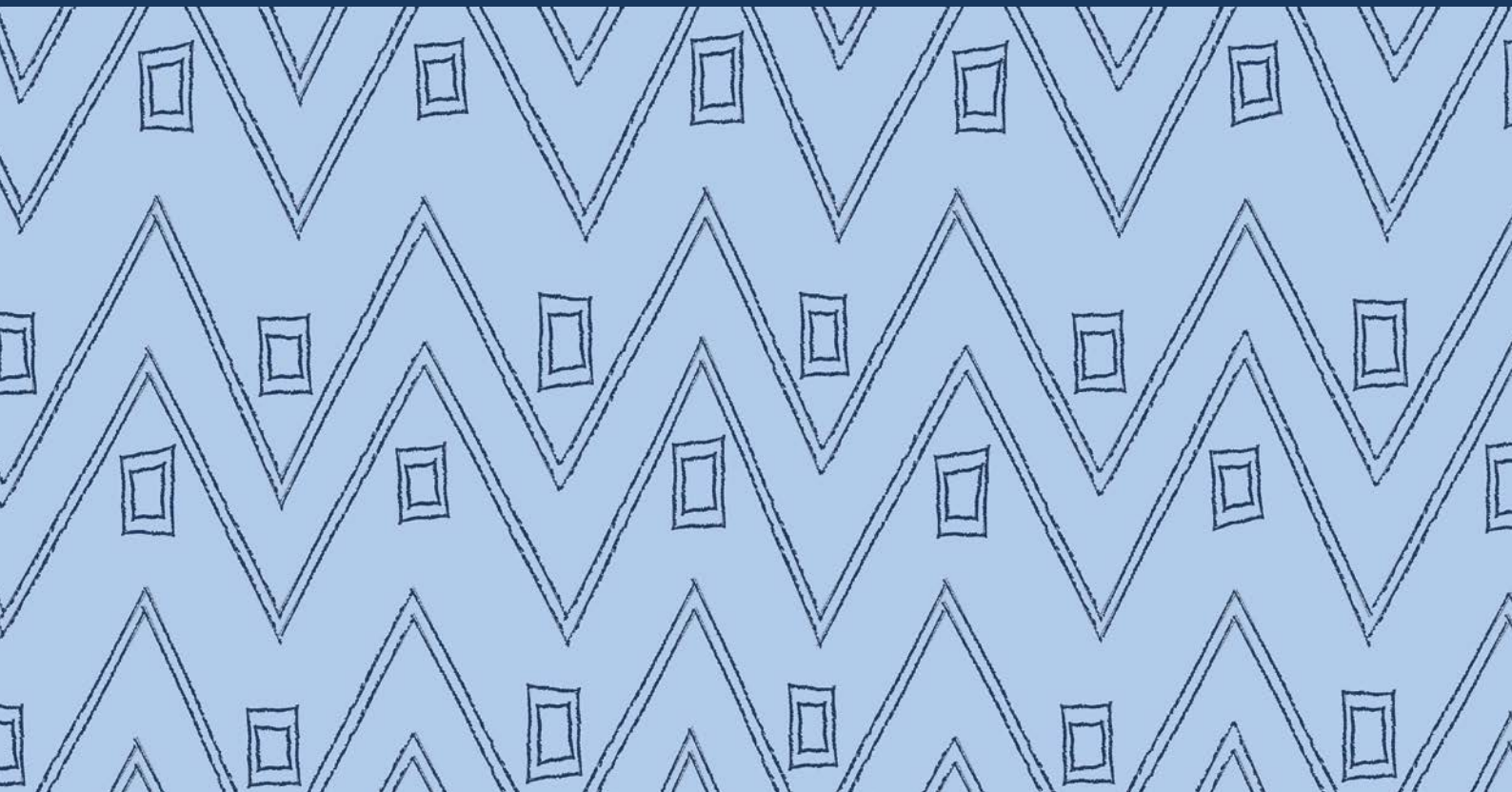




HIV AND SEXUAL BEHAVIOURS OF OUT-OF-SCHOOL YOUNG PERSONS IN NIGERIA



**ENHANCING NIGERIA'S HIV/AIDS
RESPONSE (ENR) PROGRAMME**



HIV AND SEXUAL BEHAVIOURS OF OUT-OF-SCHOOL YOUNG PERSONS IN NIGERIA



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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
AOR	Adjusted Odds Ratio
ART	Antiretroviral Treatment
ARV	Antiretroviral
CEDAW	Convention to Elimination All Forms of Discrimination against Women
DHS	Demographic Health Survey
ENR	Enhancing Nigeria's Response to HIV/AIDS
HCT	HIV Counselling and Testing
HIV	Human Immunodeficiency Virus
GBV	Gender-based Violence
GPZ	Geopolitical Zones
NC	North Central
NDHS	Nigerian Demographic Health Survey
NE	North East
NGO	Nongovernmental Organisation
NW	North West
OSYP	Out-of-school Young Persons
PSU	Presurveillance Mapping of Primary Sampling Units
SD	Standard Deviation
SE	South East
SRH	Sexual and Reproductive Health
SS	South South
SW	South West
STI	Sexually Transmitted Infection
UNAIDS	Joint United Nations Programme on HIV/AIDS

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We hope that the findings in this report will assist in advocacy and programme planning towards appropriate and improved interventions for HIV/AIDS response for young people in Nigeria.

EXECUTIVE SUMMARY

Background

Nigeria, after South Africa, has the highest number of out-of-school adolescents and young people in Nigeria (OSYP) living with HIV and AIDS globally, yet studies on HIV prevalence and sexual risk behaviours among this vulnerable group are limited. Without accurate and timely evidence, policy-makers and programme planners/managers will not be able to properly plan, design, allocate resources to, monitor, and evaluate policies and programmes that effectively address HIV prevention, care and treatment of OSYP in Nigeria.

Goal and Objectives

The main goal of this study was to determine prevalence of HIV and HIV risk behaviour among out-of-school adolescents and young people in Nigeria with a view to developing evidence-based HIV prevention and care programmes suited to their context.

Objectives of the study

Generate behavioural data to:

1. Estimate the prevalence of unprotected sexual risk behaviours among OSYP.
2. Estimate the prevalence of alcohol and recreational drug use among OSYP.
3. Determine the factors associated with high-risk behaviours among OSYP.

Generate biological data to:

1. Estimate HIV prevalence and factors that increase vulnerabilities of OSYP to HIV in Nigeria.

Methods

Between June and August 2014, OSYP were recruited in one state in each of the six geopolitical zones in Nigeria. An exploratory cross-sectional study design was deployed using quantitative approaches. Quantitative methods were used to elicit information on sexual risk behaviour and socioeconomic vulnerabilities experienced by OSYP while data on HIV prevalence was obtained by HIV rapid test according to the National algorithm. Informed consent for the behavioural, and biological components of the study was obtained by written consent from the respondents.

Results

Overall, a total of 2,106 OSYP, 1,124 males (53 percent) and 982 females (47 percent), participated in the study. A majority of the respondents had at least secondary level education (67 percent) while 19 percent of respondents had primary level education and 9 percent had no formal education. Less than 20 percent were gainfully employed. By marital status, a majority of the respondents had never been married (87 percent). About half of the respondents (54 percent) could afford three meals a day. About 8 percent of respondents used alcohol everyday while about a tenth of the respondents reported current use of cigarette and psychoactive substances.

The median age at first sex was 16 years for males and 17 years for females. Among those who had ever had sex (73 percent), about 20 percent had sexual debut before age 15 years. Thirty-seven percent of the respondents had engaged in multiple sexual partnerships in the 12 months prior to the survey while 14 percent of respondents had engaged in transactional sex. Among those who had engaged in high-risk sex, 58 percent reported using a condom. By geopolitical zone (GPZ), condom use ranged from 50 percent in the South South to 84 percent in the North West. Comprehensive knowledge of HIV was 30 percent while only 6 percent of respondents indicated that they had a high chance of contracting HIV. Only 34 percent of respondents had ever been tested for HIV and received their result.

HIV prevalence among OSYP was observed to be 1 percent. It was higher among those aged 20–24 years (2.4 percent) compared to those aged 15–19 years (1.2 percent). By gender it was higher among females (3.6 percent) compared to males (0.6 percent). It was higher among those who were formerly married (3.0 percent) and lowest among those who have never married (1.4 percent). By GPZ, it was highest in the North East region (3.9 percent) while respondents from the South East region recorded no positives. Among respondents from other zones it was 3.3 percent in North Central, 3.7 percent in North West, 1.3 percent in South South and 0.5 percent in South West. It was higher among rural dwellers (2.6 percent) compared to those in urban areas (1.0 percent).

Overall, 15 percent of female OSYP had experienced some form of sexual violence. A fifth of the respondents had been touched by someone against their will, with about 10 percent deceived into having sexual intercourse. About 10 percent of females had been raped while about 8 percent had been beaten for refusing to have sex. Sexual abuse was higher among those aged 20–24 years compared to those aged 15–19 years. Marital rape or having been beaten for refusing sex in a marital/cohabiting relationship was about 7 percent. By GPZ, respondents from the South South region reported the highest rates of sexual violence with about a third of respondents reporting that they had been deceived into having sex, been raped, and/or beaten for refusing sex.

Conclusion and Recommendations

This study highlights key vulnerabilities experienced by out of school adolescents and young people in Nigeria. A non-responsive system has left them both educationally and economically disadvantaged. Female OSYP are doubly exposed to these vulnerabilities and this exacerbates their risk to contracting HIV. Early sexual debut, multiple sex partnerships and transactional sex, presents a complex prevention need for OSYP across Nigeria. Low comprehensive HIV knowledge fails to drive and heighten HIV risk perception and may explain the sexual risk behaviours exhibited by OSYP. Lastly, the heterogeneity of HIV with respondents in northern Nigeria having higher HIV prevalence compared to their southern counterparts suggests the need for further research to determine factors driving the epidemic in this region.

Based on the findings in this study, the following recommendations are proposed:

- Establish HIV prevention programmes targeted toward OSYP to reduce sexual risk behaviours.
- Advocate state governments to adopt and domesticate Federal Laws which protect young people.
- Design appropriate interventions which heighten other components of HIV risk appraisal and thus achieve larger impact on intention and behaviour.

- Target HIV counselling and testing to OSYP to meet the testing gap and also provide positives with appropriate referral mechanisms to comprehensive care and treatment.
- States must create a gender sensitive and confidential medium for female OSYP to lodge complaints and seek legal address if their sexual rights have been violated.
- Condom programming must be culturally sensitive and target OSYP in their niche as cultural limitations may not avail them the opportunity to participate in the regular methods of prevention interventions used in Nigeria.
- Health education and behaviour change communication on the risks of alcohol and drug use should be made available to OSYP so that they will be better equipped to make informed choices and decisions on their health. OSYP Further research is required to determine factors driving the epidemic in northern Nigeria.

BACKGROUND

Out-of-school young persons (OSYP), i.e., adolescents and young persons who are not enrolled in any form of education, constitute about a third of the total population in Africa and Nigeria.¹ Adolescence is a period when experimentation with sexuality and drugs often takes place, increasing vulnerability of adolescents to HIV.² The number of OSYP living with HIV is growing, particularly in low-income countries with high HIV prevalence,² yet there are very few HIV prevention programmes designed specifically to address their needs. Across the continent, HIV prevalence among young people varies considerably from a low of less than 0.1 percent in Egypt—where the HIV epidemic is highly concentrated around persons who inject drugs and men who have sex with men³—to a high of 30 percent in South Africa and 40 percent in Zimbabwe. South Africa and Nigeria have the highest number of OSYP living with HIV and AIDS with as many as 1.9 million in South Africa and 1.3 million in Nigeria.⁴ Without accurate evidence, it is impossible for policymakers and programme implementers to adequately design, allocate resources to, monitor, and evaluate policies and programmes that effectively address the HIV prevention and impact mitigation needs (including stigma and discrimination) of the various categories of OSYP across Africa.

Data from the 2008 Nigeria Demographic Health Survey (NDHS) revealed that 16 percent of young women and 6 percent of young men aged 15–24 years engaged in sexual intercourse before age 15.⁵ Furthermore, nearly half of young women (49 percent) and a quarter (26 percent) of young men aged 18–24 years reported that their first experience of sexual intercourse was before age 18.⁵ The survey also found that across all age groups, young men reported having higher risk sexual intercourse (sex with someone who is neither a spouse nor a cohabiting partner) in the past 12 months than their female counterparts (15–19 years: 94.5 percent vs 33.3 percent; 20–24 years: 74.1 percent vs 26.3 percent). Prevalence of multiple sex partnerships among young people in Nigeria is equally high, ranging from 2.1 percent to 66 percent.⁶ A cross-sectional survey of junior secondary school students in Enugu revealed that 36.4 percent reported three or more sexual partners in the three months preceding the interview.⁷ In contrast, 40 percent of respondents in another cross-sectional survey of in-school young persons revealed that they had more than one sexual partner.⁸ Despite the relatively high levels of high-risk sexual activity, condom use among Nigerian youth remains very low with levels ranging from 8.6 to 54.5 percent.^{5,9–18}

The 2008 NDHS found that only 22 percent of young women and 33 percent of young men have comprehensive knowledge of HIV.⁵ Comprehensive knowledge is higher among young people living in urban than rural areas. Among both sexes, the proportion with comprehensive knowledge tends to increase with level of education and wealth quintile. Other studies have also reported high levels of awareness of HIV and AIDS but low comprehensive knowledge levels with significant misconceptions about HIV.^{9,19,20}

As in the adult Nigerian population, low risk perception is also a key driver of the epidemic among youth as documented by several studies.^{9–10,21} These studies have also documented a discrepancy between risk behaviour and risk perception, with young people reporting high levels of risky sexual behaviour despite low risk perception. A study of young slum dwellers in Ibadan also revealed that even when risk perception was relatively high there was still a disparity with behaviour.²² This study aimed to describe HIV prevalence and associated risk behaviours among OSYP in Nigeria in an effort

identify factors that drive the epidemic within this subpopulation as well as provide empirical data to appropriately guide resource allocation for HIV prevention and treatment.

GOAL AND OBJECTIVES

Goal

The main goal of this study was to determine the prevalence of HIV and risk behaviour among OSYP in Nigeria with a view to developing appropriate evidence-based HIV prevention, treatment, care and support interventions suited to their context.

Objectives

Generate behavioural data to:

1. Estimate the prevalence of unprotected sexual risk behaviours among OSYP.
2. Estimate the prevalence of alcohol and recreational drug use among OSYP.
3. Determine the factors associated with high-risk behaviours among OSYP.

Generate biological data to:

1. Estimate HIV prevalence and factors that increase vulnerabilities of OSYP to HIV in Nigeria.

METHODS

Study Design

An exploratory cross-sectional study design was employed using a quantitative study approaches. Quantitative methods were used measure various characteristics of interest among OSYP (sexual debut, HIV prevalence, multiple sexual partnerships, consistent condom use with sex partners, comprehensive HIV knowledge, use of alcohol and psychoactive drugs).

Study Sites

To obtain a good representation of respondents, the study was conducted in six states each selected from each of the six geopolitical zones (GPZs). Within each state, two local government areas (one rural and one urban) were randomly selected. This allowed for diversity in the pool of respondents and for comparison between and within groups (e.g., urban vs. rural). Furthermore, within each local government area, hot spots where youth meet and engage in high-risk behaviours were identified.

Definition and Recruitment

For the purpose of this study, the term “out-of-school young persons” was defined as person aged between 10 and 18 years whose highest educational attainment was Qur’anic education or primary or those aged between 19 and 24 years whose highest educational attainment was Qur’anic, primary, or secondary education.

However, since Section 64 (2) of the Child's Right Act stipulates that only a child who has attained the age of 16 years has the right to give consent for scientific investigation without parental consent, to be eligible for recruitment into the behavioural and biomedical components of this study, participants had to be:

1. 16^{a,b}–24 years of age.
2. Resident of a study site for at least six months prior to the data collection.
3. Able and willing to provide informed consent to participate in all aspects of the study.

Exclusion criterion:

1. Participants who exhibited any condition that precluded informed consent, or made study participation unsafe were excluded from the study.

^aChild Rights Act 2003: Section 64(2) of the Act provides that a child who has attained the age of 16 years has a right to give consent for scientific investigation without parental consent. However, the Children and Young Persons Acts of Nigeria 131 of 1954 defines a child as “a person under the age of 14 years.”

^bChildren and Young Persons Act, Laws of Nigeria 131 of 1954

Quantitative survey

Sample size

The sample size was calculated with Epi Info. Given that over 50 percent of male youth engaged in high-risk sex (sex with non cohabitating partner) in the last 12 months prior to the NDHS, we aimed to determine the appropriate response to the use of condom consistently during high-risk sex. Forty-nine percent of males aged 15–24 years used a condom at last high-risk sex while 36 percent of females aged 15–24 years used condom at last high-risk sex.⁵ The following formula was used to determine the sample size per group (males and females).

$$N = \frac{Deff \cdot Z_{\alpha}^2 \cdot p \cdot q}{d^2}$$

Deff = Design effect (assumed to be the value of 1.5 to account for homogeneity among OSYP sampled from the hot spot);

P = the known/assumed pre-survey value of the indicator of interest or the estimated proportion of the target population with the characteristic of interest at the time of the survey;

Z = z-score corresponding to the probability with which it is desired to be able to conclude that the observed proportion would not have occurred by chance and

d² = Absolute precision required: Precision required is set at 5 percent.

The study informants were sampled from each hot spot proportional to the total available sample of OSYP. Thus we used males as the reference to estimate the minimal sample size with a 95 percent confidence level, a power of 80 percent and a design effect of 1.5. Thus a total of 307 respondents, both males and females were required per state. This also accounted for a 10 percent refusal rate. Since Nigeria is divided into six GPZs—South South (SS), South East (SE), South West (SW), North East (NE), North West (NW), and North Central (NC)—the selected sample size was applied to each zone to allow for inter-zonal comparison. Thus total minimum sample size for the survey was 1,842.

Table 1 Quantitative survey sample size

	Behaviour indicator	% in 2008 NDHS	Sample size
Most at risk adolescent males	Condom use at last higher risk sex	49	307
Most at risk adolescent females	Condom use at last higher risk sex	36	299

Sampling of OYSP

Given the age range of the target group, time-location sampling⁶ technique was used to sample for OSYP. Time-location clusters were defined as the location where OSYP congregate, the peak day(s) of the week, and the time of the day when the highest number of OSYP were present at the site. Prior to the commencement of the survey, members of the communities, nongovernmental organisations (NGOs) working with the target populations, key informants, and a mapping consultant identified hotspots where OSYP congregate (e.g., streets, game arenas, high traffic zones, bars), including information on the time of the day when they congregate. Prior assessments were conducted to guide operational implementation of the survey as well as estimate the respective population sizes of various subgroups of OSYP per site. When the estimated number of OSYP at the site was less than the sample

size, a “take-all” approach was employed; otherwise, a stratified sampling recruitment technique was deployed.

Study Procedures

Pre-surveillance mapping of primary sampling units

The main objective of the pre-surveillance mapping exercise was to identify and list sites where OSYP could be located and the essential distinguishing characteristics of each site.

Data collection

Each state had a study team comprising of four interviewers, two counsellor testers, and a state supervisor from community-based organisations known to work with young persons. In addition, oversight supervision was provided by a staff of the monitoring and evaluation unit of the State Agency for the Control of AIDS and State Office of ENR. Prior to data collection, all members of the study team received training on the study tools and procedures.

Quantitative study

Quantitative data were collected through interviewer-administered structured questionnaires. Interviewers underwent a central level training to ensure they were conversant with the study objectives, interview techniques, and the questionnaire. The questionnaires were designed to adequately capture vulnerabilities for males and females. Questions relevant to OSYP were extracted from the NDHS questionnaire and modified as appropriate to capture the following issues:

- Demographic characteristics of respondents
- HIV-related knowledge
- Knowledge about sources of key HIV services (condoms, HIV counselling and testing [HCT], STI care, antiretrovirals [ARVs])
- Sexual activity and age at sexual debut
- Condom use
- Abstinence and premarital sex
- Multiple sexual partnerships
- High-risk sexual behaviours such as unprotected anal intercourse with male or female partners
- Condom use during high-risk sex
- Cross-generational sex
- Transactional sex
- Drunkenness during sex
- Use of psychoactive substances
- Voluntary HCT

HIV counselling and testing

This study employed the use of rapid tests using a serial algorithm according to the National HIV Counselling and Testing protocol. This includes the use of Determine (Alere Medical, USA) as a first line test and Unigold (Trinity Biotech, Plc, Bray, Ireland) as a confirmatory test for those testing positive. Stat Pak (Chembio Diagnostic Systems, New York, USA) was used as a tie breaker in case of discordance between Determine and Unigold. Trained counsellors/testers working with selected community-service organisations in the study states participated in a central level training to

understand the study objectives and tools, e.g., the use of study specific consent forms, HIV test request and result forms, and the daily usage report form which captures the use of HIV test kits. HCT was offered free-of-charge and HIV pre-test counselling was administered before testing and post-test counselling was offered after testing. Respondents who consented to receiving HCT provided a drop of capillary blood through a needle prick. The HIV test was conducted on the spot using the serial algorithm according to the manufacturer's specifications. This was immediately followed by post-test counselling irrespective of the outcome of the test. Respondents with reactive results were referred to designated HIV testing sites for further evaluation and management. Those who were non-reactive were encouraged to repeat the test after three months.

Ethical review

Ethical approvals were obtained from the Institutional Review Boards of the Nigeria Institute of Medical Research and the Population Council, New York. In addition, special precautions were taken during the data collection to maximize the safety and confidentiality of respondents. Each respondent consented—signed or thumb-printed—separately for the behavioural and biological components of the study. Participants who were reactive to the HIV rapid test were referred to government hospitals for further management.

Data Analysis

The overarching objective of this study was to determine the prevalence of HIV among OSYP as well as behaviours that drive the epidemic. Our data analyses focused on highlighting HIV and sexual risk behaviours at regional and national levels. Proportions were calculated to determine prevalence of risk behaviours among the target groups. Data analysis was conducted using STATA 10.

RESULTS

Sociodemographic Characteristics

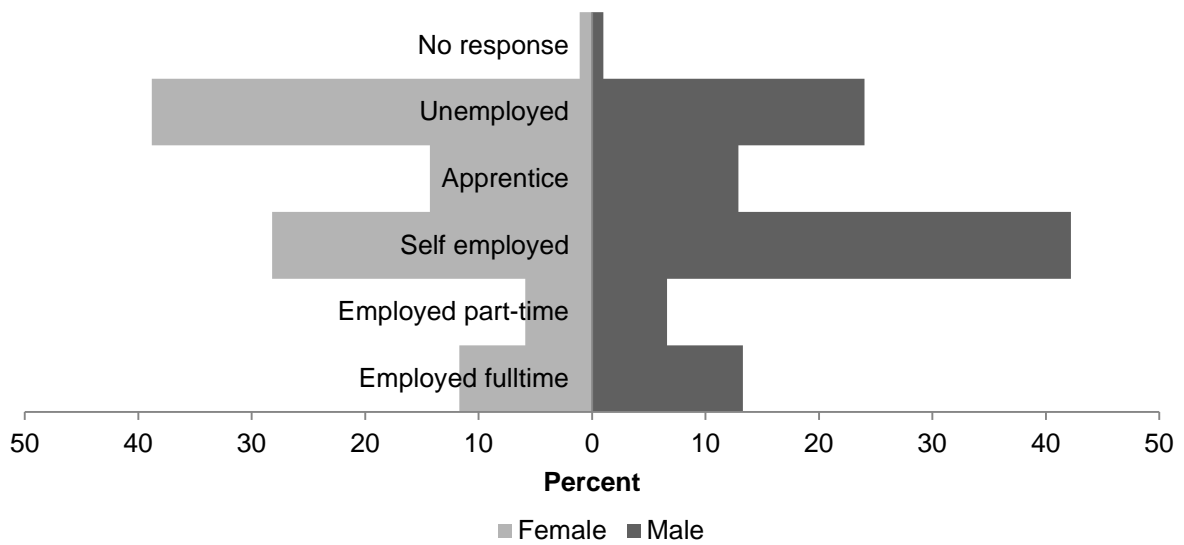
Overall, a total of 2,106 OSYP, 1,124 males (53.4 percent) and 982 females (46.6 percent), participated in this survey (Table 2). The mean age of male respondents was 20.5 (standard deviation [SD], 2.4) years and of females was 19.8 (SD, 2.5) years. The median age for the total study population was 20.0 years (interquartile range 18–22 years). Majority of the respondents had at least secondary level education (70.3 percent) and were single (85.6 percent). Majority of the respondents were employed (35.7 percent self-employed; 13.5 percent apprentices; 12.6 percent employed full time; 6.3 percent employed part-time) with a little over a quarter unemployed (30.9 percent). Distribution of occupation status by sex is presented in Figure 1. Of note, more female OSYP were unemployed than their male peers (38.8 percent vs 24 percent).

More respondents resided in rural (58 percent) than urban (42 percent) areas and most (76.1 percent) were Christian.

Table 2 Distribution of respondents by selected background characteristics (N = 2,106)

	%	Total
Age		
15–19	40.0	843
20–24	60.0	1,263
Sex		
Male	53.4	1,124
Female	46.6	982
Marital status		
Currently married/cohabiting	13.0	273
Never married	85.6	1,803
Formerly married	0.9	20
Education		
None	9.3	196
Qur'anic only	0.5	10
Primary	19.4	409
Secondary	66.7	1,404
Higher	3.6	76
Occupation		
Employed full time	12.6	265
Employed part-time	6.3	133
Self-employed	35.7	752
Apprentice	13.5	284
Unemployed	30.9	651
No response	1.0	22
Religion		
Islam	19.9	419
Non-Catholic Christian	50.0	1,054
Catholic	26.1	549
Other	4.0	84
Region of residence		
NC	14.6	307
NE	14.6	307
NW	14.3	302
SE	14.6	307
SS	14.6	307
SW	27.4	576
Location of residence		
Urban	41.6	876
Rural	58.4	1,230

Figure 1 Occupation distribution by sex



Living conditions

An analysis of the living conditions (Table 3) of OSYP showed that two-fifths of them lived with both parents (41 percent). By region, those in the SS had the highest proportion of OSYP who lived alone (28 percent) while by place of residence, living alone was higher among urban dwellers (19 percent) compared to rural dwellers (13 percent).

Table 3 Current living conditions of respondents

	Live with both parents %	Live with one parent %	Live with a guardian %	Live alone %	Other %	No response %	Total
Age							
15–19	50.9	22.5	17.0	5.2	4.2	0.2	843
20–24	34.8	15.2	15.6	22.2	11.6	0.6	1,263
Sex							
Male	42.4	16.8	14.3	22.0	4.4	0.1	1,124
Female	39.9	19.7	18.2	7.8	13.5	0.8	982
Marital status							
Currently married/cohabiting	7.7	4.0	4.8	32.2	49.5	1.8	273
Never married	46.7	20.4	18.0	12.3	2.4	0.2	1,803
Formerly married	10.0	15.0	5.0	65.0	5.0	0.0	20
No response	40.0	0.0	20.0	20.0	20.0	0.0	10
Education							
None	34.7	16.8	25.5	13.3	9.2	0.5	196
Qur'anic only	40.0	30.0	20.0	10.0	0.0	0.0	10
Primary	33.7	23.0	15.9	16.1	10.8	0.5	409
Secondary	44.0	17.2	15.5	14.7	8.0	0.4	1,404
Higher	47.4	11.8	6.6	25.0	9.2	0.0	76
Religion							
Islam	47.3	12.6	13.1	16.7	9.8	0.5	419
Non-Catholic Christian	38.9	19.3	16.4	16.3	8.5	0.6	1,054
Catholic Christian	39.9	20.8	18.0	12.0	9.1	0.2	549
Others	50.0	14.3	15.5	19.0	1.2	0.0	84
Region of residence							
NC	40.4	22.1	12.7	7.8	16.6	0.3	307
NE	47.6	18.6	23.1	7.2	3.3	0.3	307
NW	57.3	16.6	7.6	15.6	2.3	0.7	302
SE	44.6	19.2	18.9	15.6	1.6	0.0	307
SS	21.2	25.7	12.1	28.3	11.4	1.3	307
SW	38.9	12.0	19.4	16.7	12.8	0.2	576
Location of residence							
Urban	38.4	14.7	18.8	19.2	8.3	0.6	876
Rural	43.3	20.6	14.2	12.7	8.9	0.3	1,230
Total	41.3	18.1	16.1	15.4	8.6	0.4	2,106

Food Security

Table 4 demonstrates that over half of the respondents (54 percent) especially in the NC (64 percent), SE (59.6 percent), SW (56.2 percent), and NE (51.1 percent) regions reported they could afford three meals a day through a month. A higher proportion of respondents in the urban (63.4 percent) than rural (47 percent) areas could afford three meals a day. Less than 5 percent of respondents could not guarantee one meal a day.

Table 4 Individual food security status

	Cannot guarantee a meal a day %	Can only afford one meal a day %	Can only afford two meals a day %	Can afford three meals a day %	No response %	Total
Age						
15–19	4.6	7.4	40.2	47.2	0.6	843
20–24	2.6	6.3	32.5	58.2	0.3	1,263
Sex						
Male	3.1	6.9	34.2	55.5	0.3	1,124
Female	3.8	6.5	37.3	51.8	0.6	982
Marital status						
Currently married/ Cohabiting	3.7	2.9	28.6	64.5	0.4	273
Never married	3.4	7.4	36.8	52.0	0.4	1,803
Formerly married	5.0	0.0	30.0	65.0	0.0	20
No response	0.0	10.0	30.0	60.0	0.0	10
Education						
None	3.1	11.2	34.7	51.0	0.0	196
Qur'anic only	20.0	10.0	40.0	30.0	0.0	10
Primary	2.4	10.0	43.8	43.5	0.2	409
Secondary	3.6	5.4	34.0	56.6	0.6	1,404
Higher	5.3	1.3	23.7	69.7	0.0	76
Religion						
Islam	4.3	7.4	42.5	45.8	0.0	419
Non-Catholic Christian	3.5	6.4	36.4	53.3	0.4	1,054
Catholic Christian	2.9	6.7	30.2	59.2	0.9	549
Others	1.2	8.3	26.2	64.3	0.0	84
Region of residence						
NC	2.3	3.9	29.6	63.8	0.3	307
NE	0.3	5.2	43.3	51.1	0.0	307
NW	0.0	1.0	55.3	42.7	1.0	302
SE	0.7	7.5	31.3	59.6	1.0	307
SS	1.6	3.3	47.6	46.9	0.7	307
SW	9.9	13.5	20.3	56.2	0.0	576
Location of residence						
Urban	3.7	4.5	28.2	63.4	0.3	876
Rural	3.3	8.4	40.9	47.0	0.5	1,230
Total	3.4	6.7	35.6	53.8	0.4	2,106

Use of alcohol

Overall, nearly 8 percent of respondents (Table 5), comprising more males (11 percent) than females (4 percent), reported drinking alcohol daily. Additionally, daily consumption of alcohol was highest among those with less than primary education (10 percent); formerly married (20 percent); and resided in the NE region (13 percent) and urban areas (9 percent).

Table 5 Use of alcohol

	Everyday %	At least once a week %	Less than once a week %	Never %	Not sure %	No response %	Total
Age							
15–19	5.5	13.8	8.2	70.9	1.3	0.4	843
20–24	8.9	23.0	10.3	55.7	1.4	0.6	1,263
Sex							
Male	11.0	26.7	10.9	49.5	1.3	0.5	1,124
Female	3.6	10.8	7.7	76.0	1.4	0.5	982
Marital status							
Currently married/ cohabiting	8.4	13.9	10.6	65.2	1.8	0.0	273
Never married	7.3	20.1	9.3	61.4	1.3	0.6	1,803
Formerly married	20.0	25.0	10.0	45.0	0.0	0.0	20
No response	10.0	10.0	0.0	80.0	0.0	0.0	10
Education							
None	9.7	13.3	6.1	70.9	0.0	0.0	196
Qur'anic only	10.0	10.0	10.0	70.0	0.0	0.0	10
Primary	10.3	18.3	7.6	61.6	1.7	0.5	409
Secondary	6.6	20.4	10.3	60.5	1.6	0.6	1,404
Higher	3.9	22.4	11.8	61.8	0.0	0.0	76
Region of residence							
NC	3.3	16.9	8.1	68.7	2.3	0.7	307
NE	13.0	11.1	4.6	70.7	0.7	0.0	307
NW	1.3	5.6	2.0	88.7	1.0	1.3	302
SE	4.2	30.0	18.6	45.0	2.3	0.0	307
SS	11.1	36.5	12.7	35.5	3.3	1.0	307
SW	10.1	17.2	10.1	62.3	0.0	0.3	576
Location of residence							
Urban	9.2	23.4	10.4	54.7	1.9	0.3	876
Rural	6.3	16.3	8.8	66.9	1.0	0.7	1,230
Total	7.5	19.3	9.4	61.8	1.4	0.5	2,106

Use of cigarette and psychoactive substances

One-tenth of the respondents (Table 6) reported smoking cigarettes and using psychoactive substances. Smoking and substance use were higher among males (17 percent); 20–24 year olds (13 percent); formerly married (>15 percent); those with tertiary education (>10 percent); and urban dwellers (>12 percent).

Table 6 Use of cigarette and psychoactive drugs

	Proportion who currently smoke cigarette %	Proportion using any psychoactive drug* %	Total number of respondents
Age			
15–19	5.0	6.2	843
20–24	13.1	13.3	1,263
Sex			
Male	16.7	17.5	1,124
Female	1.9	2.3	982
Marital status			
Currently married/cohabiting	9.2	5.9	273
Never married	9.9	11.0	1,803
Formerly married	15.0	20.0	20
Education			
None	10.2	11.7	196
Qur'anic only	10.0	0.0	10
Primary	8.6	10.5	409
Secondary	9.8	10.4	1,404
Higher	15.8	10.5	76
Region of residence			
NC	6.2	3.6	307
NE	16.3	15.6	307
NW	14.2	9.6	302
SE	8.8	6.2	307
SS	7.8	20.2	307
SW	7.6	8.9	576
Location of residence			
Urban	11.9	14.7	876
Rural	8.4	7.4	1,230
Total	9.8	10.4	2,106

*Cocaine, heroin, marijuana, glue or amphetamines

Sexual Behaviour

Ever had sex

Table 7 shows that a high proportion of the respondents in this study had ever had sex (73 percent). A higher proportion of respondents aged 20–24 years (86 percent) reported ever having had sex than those aged 15–19 years (53 percent). Similarly, slightly more males (75 percent) than females (70 percent) and more urban (77 percent) than rural dwellers (70 percent) had ever had sex.

Table 7 Percentage distribution of respondents who have ever had sex

	Ever had sex %	Total number of respondents
Age		
15–19	53.3	843
20–24	86.0	1,263
Sex		
Male	75.4	1,124
Female	70.1	982
Marital status		
Currently married/cohabiting	97.4	273
Never married	68.9	1,803
Formerly married	95.0	20
Education		
None	64.8	196
Qur'anic only	20.0	10
Primary	68.2	409
Secondary	74.6	1,404
Higher	93.4	76
Region of residence		
NC	73.0	307
NE	78.5	307
NW	56.6	302
SE	64.2	307
SS	88.9	307
SW	74.5	576
Location of residence		
Urban	77.2	876
Rural	69.8	1,230
Total	72.9	2,106

Sexual debut

The median age at sexual debut was 16 years for males and 17 years for females, although overall, one-fifth of OSYP in this study had their sexual debut before their fifteenth birthday. As shown in Table 8, more males (23 percent) than females (16 percent) and more of those aged 15–19 years (29 percent) than 20–24 years (16 percent) had their sexual debut before 15 years. The highest proportion of respondents who reported their sexual debut before 15 years was from the SS zone (44 percent) and the lowest from the NW region (7 percent).

Median age of sexual debut was 15 years among OSYP with no formal education and 18 years among those with tertiary education. By GPZ, sexual debut was 16 years in the NE region and highest in SE region (18 years) while it was lower in rural areas compared to urban areas (16 years vs. 17 years).

Table 8 Sexual debut before 15 years among respondents who had ever had sex

	Sexual debut before age 15 %	Number of respondents who ever had sex
Age		
15–19	28.5	449
20–24	16.4	1,086
Sex		
Male	22.7	847
Female	16.6	688
Education		
None	22.0	127
Primary	24.4	279
Secondary	18.8	1,047
Higher	16.9	71
Region of residence		
NC	14.7	224
NE	19.1	241
NW	7.0	171
SE	14.2	197
SS	44.7	273
SW	15.2	429
Location of residence		
Urban	20.6	676
Rural	19.4	859
Total	19.9	1,535

Sexual risk behaviours

Multiple sexual partnerships

Overall, 37 percent of respondents had engaged in multiple sexual partnerships in the 12 months prior to the survey (Table 9). It was higher among those aged 20–24 years (38 percent) compared to those aged 15–19 years (33 percent). More males compared to females (50 percent vs. 20 percent) reported engaging in multiple sexual partnerships. It was highest among those who had tertiary level education (45 percent) and lowest among those with primary education. By GPZ, multiple sexual partnerships were highest in the NW region (42 percent) and lowest in the NC region (26 percent) while it was higher in urban areas compared to rural areas (40 percent vs. 34 percent).

Transactional sex

Table 9 also demonstrates that 14 percent of all respondents reported transactional sex. More females (19 percent) than males (11 percent) had engaged in transactional sex. It was highest among those with tertiary education (17 percent); from the SS region (26 percent); and resided in urban areas (16 percent).

Table 9 Distribution of transactional sex and multiple sexual partnerships among OSYP

	Ever had sex in exchange for gifts or favours %	Multiple sexual partnerships %	Number of respondents who have ever had sex
Age			
15–19	14.3	33.3	449
20–24	14.4	37.9	1,086
Sex			
Male	11.0	50.1	847
Female	18.5	19.9	688
Marital status			
Currently married/cohabiting	13.2	15.0	266
Never married	14.3	41.4	1,243
Formerly married	26.3	21.1	19
Education			
None	15.7	34.6	127
Qur'anic only	0.0	50.0	2
Primary	15.8	33.7	279
Secondary	13.8	36.9	1,047
Higher	16.9	45.1	71
Region of residence			
NC	16.1	26.3	224
NE	19.9	36.9	241
NW	7.0	41.5	171
SE	8.1	34.5	197
SS	26.0	39.6	273
SW	8.6	33.7	429
Location of residence			
Urban	15.5	40.2	676
Rural	13.4	33.6	859
Total	14.3	36.5	1,535

Condom use among OSYP

Despite most of the respondents hearing about (94 percent) and ever using (75 percent) male condoms, only 58 percent reported current use (Table 10). Current use of male condoms was higher among those aged 20–24 years (61 percent), males (67 percent), never married (64 percent), tertiary education, and urban dwellers (66 percent).

Table 10 Ever and current condom use

	Ever used male condom %	Currently using male condom %	Number of respondents who have ever had sex
Age			
15–19	67.5	52.3	449
20–24	78.6	60.9	1,086
Sex			
Male	81.5	66.9	847
Female	67.9	47.8	688
Marital status			
Currently married/cohabiting	64.7	34.2	266
Never married	77.6	64.0	1,243
Formerly married	73.7	31.6	19
Education			
None	58.3	41.7	127
Qur'anic only	50.0	50.0	2
Primary	66.3	48.7	279
Secondary	78.9	61.5	1,047
Higher	90.1	77.5	71
Religion			
Islam	75.4	57.1	252
Non-Catholic Christian	74.6	58.6	835
Catholic Christian	76.1	58.1	394
Others	81.5	63.0	54
Region of residence			
NC	76.8	55.4	224
NE	73.4	59.8	241
NW	78.4	63.2	171
SE	72.1	55.8	197
SS	76.2	57.5	273
SW	75.5	59.0	429
Location of residence			
Urban	82.8	66.4	676
Rural	69.5	52.0	859
Total	75.4	58.4	1,535

Among the 923 respondents (44 percent) who reported having had sex with non-marital sex partners—defined as high-risk sex in this study—58 percent reported using condom during the last high-risk sex (Table 11). Condom use during the last high-risk sexual encounter was higher among those aged 20–24 years compared to those aged 15–19 years (59 percent vs. 53 percent) and higher among males than females (65 percent vs. 47 percent) and higher among urban than rural (64 percent vs. 53 percent). By educational status, it was highest among those with at least secondary education (60 percent); and by GPZ, it was highest in the NW region (84 percent) and lowest in the SS region (50 percent).

Table 11 Condom use with non-marital sex partners

	Used condom during high-risk sex %	Number of respondents who had high-risk sex in the last 12 months
Age		
15–19	53.3	255
20–24	59.4	668
Sex		
Male	64.5	577
Female	46.5	346
Marital status		
Currently married/cohabiting	34.9	83
Never married	60.1	829
Formerly married	75.0	8
Education		
None	55.6	72
Qur'anic only	0.0	1
Primary	49.0	153
Secondary	60.2	645
Higher	58.0	50
Religion		
Islam	65.1	109
Non-Catholic Christian	53.2	511
Catholic Christian	62.3	276
Others	66.7	27
Region of residence		
NC	56.5	186
NE	59.1	171
NW	84.2	19
SE	66.4	134
SS	50.0	108
SW	55.1	305
Location of residence		
Urban	63.9	415
Rural	52.8	508
Total	57.7	923

Knowledge, Opinions and Attitudes about HIV and AIDS

Comprehensive HIV knowledge

Overall 98 percent of respondents were aware of HIV and AIDS (Table 12) and this finding was consistent when disaggregated by age, gender, education, and GPZs.

Comprehensive knowledge of HIV knowledge (Table 13) was assessed using a UNAIDS composite indicator in which a respondent correctly answers three known routes of HIV transmission and rejects two major misconceptions of HIV transmission. In this study, only 30 percent of the respondents displayed comprehensive knowledge of HIV. It was higher among those aged 20–24 years compared to those aged 15–19 years (32 percent vs. 27 percent). Comprehensive knowledge was highest among those with tertiary level education (46 percent) and lowest among those with only Qur'anic education (10 percent). By GPZ, it was highest among respondents in the NE (40 percent) and lowest among those in the SE (13 percent). By location of residence, comprehensive knowledge was higher among urban dwellers compared to rural dwellers (37 percent vs. 24 percent).

Table 12 Awareness of HIV and AIDS

	Heard of HIV or AIDS %	Number of all respondents
Age		
15–19	96.6	843
20–24	98.7	1,263
Sex		
Male	98.3	1,124
Female	97.3	982
Education		
None	93.4	196
Qur'anic only	100.0	10
Primary	97.3	409
Secondary	98.5	1,404
Higher	98.7	76
Region of residence		
NC	99.0	307
NE	97.7	307
NW	97.7	302
SE	98.7	307
SS	97.7	307
SW	96.9	576
Location of residence		
Urban	98.2	876
Rural	97.6	1,230
Total	97.8	2,106

Table 13 Knowledge about HIV transmission (UNAIDS Indicators)

	HIV transmission can be reduced by staying with one uninfected partner %	Can reduce HIV transmission by using condom all time %	Healthy looking person can be HIV positive %	Sharing toilet cannot spread HIV %	Sharing eating utensils cannot spread HIV %	Who got all five right %	Number of all respondents
Age							
15–19	76.4	82.8	65.7	46.3	58.1	26.5	843
20–24	84.4	90.7	74.6	49.2	49.2	31.8	1,263
Sex							
Male	79.4	89.9	71.9	48.9	58.5	30.0	1,124
Female	83.3	84.9	70.1	46.9	59.1	29.3	982
Education							
None	76.5	78.1	63.8	48.5	61.2	31.6	196
Qur'anic only	60.0	50.0	60.0	20.0	40.0	10.0	10
Primary	78.5	84.8	62.8	40.3	53.3	21.3	409
Secondary	82.8	89.5	73.8	49.5	59.7	31.1	1,404
Higher	86.8	96.1	81.6	67.1	72.4	46.1	76
Region of residence							
NC	87.9	90.6	68.7	33.9	37.5	17.3	307
NE	93.2	89.3	79.8	56.4	78.2	40.4	307
NW	67.9	83.1	77.8	42.4	45.0	28.1	302
SE	64.2	74.9	73.0	29.6	44.0	13.0	307
SS	83.1	93.5	73.6	57.0	68.4	35.2	307
SW	86.3	91.0	61.6	59.0	69.8	37.3	576
Location of residence							
Urban	81.4	89.3	77.9	57.8	62.2	37.3	876
Rural	81.1	86.3	66.2	41.1	56.3	24.2	1,230
Total	81.2	87.6	71.0	48.0	56.3	29.7	2,106

HIV risk perception

HIV risk perception (Table 14) was assessed by asking respondents to rate their chances of contracting HIV. Only 6 percent of respondents indicated a high chance of contracting HIV whilst 45 percent of respondents reported no risk of contracting HIV. Risk perception was higher among those aged 20–24 years (7 percent) compared to those aged 15–19 years (4 percent). More males (7 percent) felt at risk of contracting HIV than females (4 percent). HIV risk perception was highest among those in SE (12 percent) and lowest among those in NW (2 percent).

Table 14 HIV risk perception

	High chance %	Low chance %	No risk at all %	Already have HIV %	No response %	Number of all respondents
Age						
15–19	3.7	43.4	46.6	0.7	5.7	814
20–24	7.1	46.5	40.1	0.9	5.4	1,246
Sex						
Male	7.2	44.3	43.3	0.7	4.4	1,105
Female	4.0	46.5	41.9	0.9	6.7	955
Marital status						
Currently married/cohabiting	3.0	50.4	40.7	0.7	5.2	270
Never married	6.2	44.6	43.0	0.8	5.5	1,761
Formerly married	5.0	40.0	40.0	5.0	10.0	20
Education						
None	2.7	44.3	45.4	0.5	7.1	183
Qur'anic only	0.0	50.0	50.0	0.0	0.0	10
Primary	7.3	43.5	43.7	0.8	4.8	398
Secondary	5.7	45.6	42.2	0.9	5.5	1,383
Higher	6.7	48.0	40.0	0.0	5.3	75
Region of residence						
NC	3.3	57.6	31.2	0.7	7.2	304
NE	11.0	62.7	21.0	2.7	2.7	300
NW	2.4	28.1	58.6	0.0	10.8	295
SE	11.9	40.9	44.6	0.3	2.3	303
SS	6.0	40.0	48.7	0.7	4.7	300
SW	2.5	43.5	47.8	0.7	5.4	558
Location of residence						
Urban	6.9	42.9	43.6	1.2	5.5	860
Rural	4.9	47.0	42.0	0.6	5.5	1,200
Total	5.7	45.3	42.7	0.8	5.5	2,060

HIV Counselling and Testing

Overall, about 70 percent of respondents knew where to get an HIV test. More respondents in the urban areas knew where to get an HIV test compared to their rural counterparts (80 percent vs. 62 percent). By GPZ, those in the SS region (86 percent) had the highest proportion of those who knew where to get an HIV while the lowest was in SW (57 percent). Among those who had never been tested for HIV, over 96 percent desired to be tested for HIV (Table 15). However as Table 16 shows, only 34 percent of respondents ever tested and received their results, many of whom did so in the last 12 months (59 percent). Respondents from the NC region topped the list (59 percent) of those who ever tested and received their results while the SW (22 percent) had the lowest proportion of those who ever tested.

Table 15 Respondents desires of being tested for HIV

	Proportion who desire to have an HIV test %	Number of respondents who have heard of HIV and have never been tested for HIV
Age		
15–19	95.1	573
20–24	96.5	636
Sex		
Male	96.7	667
Female	94.8	542
Marital status		
Currently married/cohabiting	95.2	105
Never married	95.9	1,092
Formerly married	100.0	7
Education		
None	95.5	133
Qur'anic only	100.0	7
Primary	96.0	253
Secondary	95.7	787
Higher	100.0	23
Religion		
Islam	96.6	290
Non-Catholic Christian	96.3	615
Catholic Christian	95.4	260
Others	88.6	44
Region of residence		
NC	89.3	112
NE	94.0	199
NW	98.2	166
SE	96.6	178
SS	94.7	150
SW	97.8	404
Location of residence		
Urban	95.5	448
Rural	96.1	761
Total	95.9	1,209

Table 16 Ever tested and received results

	Received the result of HIV test %	Number of all respondents
Age		
15–19	21.4	843
20–24	42.8	1,263
Sex		
Male	32.6	1,124
Female	36.2	982
Marital status		
Currently married/cohabiting	53.8	273
Never married	31.1	1,803
Formerly married	55.0	20
Education		
None	20.4	196
Qur'anic only	20.0	10
Primary	26.7	409
Secondary	37.0	1,404
Higher	60.5	76
Region of residence		
NC	58.6	307
NE	25.7	307
NW	36.1	302
SE	32.6	307
SS	40.4	307
SW	22.4	576
Location of residence		
Urban	42.1	876
Rural	28.6	1,230
Total	34.2	2,106

Sexually Transmitted Infections

Table 17 shows that two-thirds of the respondents had heard of sexually transmitted infections (STIs). Awareness was higher among those aged 20–24 years (76 percent) and among males (67 percent). Awareness of STIs was similar for both urban and rural settings (63 percent), while by region, it was highest among OSY in the SW (70 percent) and lowest among those from the NW (47 percent). By educational level, awareness of STIs was highest among those with tertiary level education (90 percent) and lowest among those with no formal education and Qur'anic only education (30 percent).

Table 17 Awareness of STIs

	Proportion who have heard of STIs %	Number of all respondents
Age		
15–19	44.2	843
20–24	75.9	1,263
Sex		
Male	66.9	1,124
Female	59.1	982
Marital status		
Currently married/cohabiting	80.2	273
Never married	60.6	1,803
Formerly married	70.0	20
Education		
None	55.1	196
Qur'anic only	30.0	10
Primary	54.0	409
Secondary	65.9	1,404
Higher	89.5	76
Region of residence		
NC	51.8	307
NE	68.7	307
NW	47.4	302
SE	56.4	307
SS	79.5	307
SW	69.8	576
Location of residence		
Urban	63.2	876
Rural	63.2	1,230
Total	63.2	2,106

A review of self-reported STIs in the last 12 months (Table 18) showed that prevalence of reported STIs among OSYP was 9 percent. Self-reports of STIs were higher among females compared to males (12 percent vs. 6 percent). Self-reports of STIs was highest among respondents from the NC region (20 percent) and those from rural areas (9 percent). By education, self-reports of STIs was highest among those with no formal education (10 percent) and lowest among those with tertiary level education (7 percent).

Table 18 Experience of STIs symptoms

	Proportion who experienced STI symptoms in the last 12 months %	Number of respondents who have ever had sex
Age		
15–19	8.9	449
20–24	8.3	1,086
Sex		
Male	5.7	847
Female	11.9	688
Marital status		
Currently married/cohabiting	10.2	266
Never married	8.1	1,243
Formerly married	10.5	19
Education		
None	10.2	127
Primary	7.5	279
Secondary	8.6	1,047
Higher	7.0	71
Region of residence		
NC	19.6	224
NE	9.1	241
NW	0.0	171
SE	5.1	197
SS	3.7	273
SW	10.3	429
Location of residence		
Urban	7.5	676
Rural	9.2	859
Total	8.5	1,535

Sexual Violence

OSYP face different types of vulnerabilities including sexual violence which increases their risk of acquiring STIs including HIV. Overall, 15 percent (Table 19) of female OSYP had experienced some form of sexual violence. One-fifth of the respondents had been touched by someone against their will and 10 percent were deceived into having sexual intercourse. Nearly 10 percent of females reported being raped while 8 percent were beaten for refusing to have sex. Reported sexual abuse was higher among those aged 20–24 years compared to those aged 15–19 years (16 percent vs. 13 percent). More married respondents reported being beaten for refusing to have sex (9 percent). Prevalence of reported sexual violence was highest in the SS region (46 percent) and least in the NW region (2 percent). Similarly, sexual violence was higher in urban than rural areas (22 percent vs. 11 percent).

Table 19 Sexual violence

	Touched by someone against will %	Someone tried to force them to have sexual intercourse %	Tricked into sexual intercourse %	Forced into sexual intercourse/ Raped %	Beaten for refusing to have sex %	Drugged before sexual intercourse %	Experienced sexual violence %	Number of all respondents %
Age								
15–19	17.3	10.5	9.8	8.0	6.4	2.3	13.4	440
20–24	22.1	14.2	9.2	10.3	8.5	2.2	16.4	542
Marital status								
Currently married/cohabiting	23.3	15.3	9.0	9.0	8.5	1.6	16.4	189
Never married	19.4	11.6	9.6	9.2	7.4	2.5	14.7	773
Formerly married	13.3	26.7	13.3	20.0	6.7	0.0	20.0	115
Region of residence								
NC	40.9	22.1	10.1	11.4	4.7	0.7	16.8	149
NE	20.3	7.4	4.7	4.1	2.7	2.0	10.8	148
NW	7.4	2.3	1.1	0.6	0.0	0.0	1.7	175
SE	19.8	17.9	6.6	6.6	5.7	4.7	14.2	106
SS	35.8	28.3	31.4	31.4	30.8	5.7	45.9	159
SW	5.7	4.5	4.9	4.1	3.3	1.6	6.5	245
Location of residence								
Urban	27.7	18.3	14.5	14.0	11.0	3.5	22.3	372
Rural	15.2	9.0	6.4	6.4	5.4	1.5	10.7	610
Total	20.0	12.5	9.5	9.3	7.5	2.2	15.1	982

HIV Sero-Prevalence

Prevalence of HIV in this study population of OSYP was 1 percent (Table 20). Prevalence was higher among those aged 20–24 years compared to those aged 15–19 years (2.4 percent vs. 1.2 percent) and among females than males (3.4 percent vs. 0.6 percent). It was also higher among the formerly married (30 percent) respondents and among those with primary education (2.5 percent). By GPZ, it was highest in the NE region (3.9 percent) and least in SE (1.3 percent). HIV prevalence was also higher among rural dwellers (2.6 percent) than urban dwellers (1.0 percent).

Table 20 HIV sero-prevalence

	Proportion who tested positive for HIV %	Number of respondents who tested
Age		
15–19	1.2	830
20–24	2.4	1,235
Sex		
Male	0.6	1,104
Female	3.4	962
Marital status		
Currently married/cohabiting	3.3	270
Never married	1.4	1,765
Formerly married	30.0	20
Education		
Qur'anic only	0.0	10
Primary	2.5	398
Secondary	1.8	1,384
Higher	1.3	75
Region of residence		
NC	3.3	303
NE	3.9	307
NW	3.7	296
SE	0.0	307
SS	1.3	301
SW	0.5	551
Location of residence		
Urban	1.0	861
Rural	2.6	1,204
Total	1.0	2,065

Factors Associated with HIV

Table 21 presents results from the multivariate analysis using logistic regression to identify factors independently associated with HIV infection among OSYP in Nigeria. When controlled for age (15–19 years vs. 20–24 years), gender (female vs. male), educational status, marital status, place of living (rural vs. urban), and GPZs, females were seven times more likely to be HIV positive (adjusted odds ratio [AOR]: 7.31; 95 percent CI: 2.95–18.11) than males. Those who were married or in a cohabiting relationship were four times more likely (AOR: 3.78; 95 percent CI: 1.70–8.41) to be HIV positive than those who had never married. Compared to those in the SW region, OSYP residing in NC (AOR: 6.58; 95 percent CI: 1.72–25.20), NE (AOR: 8.96; 95 percent CI: 2.39–33.58), and NW (AOR: 8.08; 95 percent CI: 2.15–30.37) were more likely to be HIV positive. There was no difference in HIV rates

between those in SW and SS. By location, those in rural settings were three times more likely (AOR: 2.94; 95 percent CI: 1.33–6.53) to be HIV positive than those in urban settings. Compared to those who had no comprehensive HIV knowledge, those with comprehensive HIV knowledge were two times more likely to be HIV positive (AOR: 2.02; 95 percent CI: 1.01–4.06). Those who engaged in multiple sexual partnerships were six times more likely to be HIV positive than those who did not engage in multiple sexual partnerships (AOR: 5.76; 95 percent CI: 2.62–12.66).

Table 21 Factors associated with HIV infection among the OSYP

Factors	Odds Ratio (95%CI)	Adjusted Odds Ratio (95%CI)
Age		
15–19 (Ref)	1.00	1.0
20–24	2.04 (0.99, 4.20)	2.07 (0.93, 4.58)
Sex		
Male (Ref)	1.00	1.00
Female	5.56 (2.45, 12.63)***	7.31 (2.95, 18.11)***
Marital status		
Never married (Ref)	1.00	1.00
Ever married/cohabiting	3.80 (1.98, 7.29)***	3.78 (1.70, 8.41)**
Region of residence		
NC	6.23 (1.70, 22.83)**	6.58 (1.72, 25.20)**
NE	7.43 (2.08, 26.54)**	8.96 (2.39, 33.58)**
NW	7.05 (1.95, 25.47)**	8.08 (2.15, 30.37)**
SE	—	—
SS	2.46 (0.55, 11.07)	2.11 (0.43, 10.24)
SW (Ref)	1.00	1.00
Location of residence		
Urban (Ref)	1.00	1.00
Rural	2.50 (1.19, 5.28)*	2.94 (1.33, 6.53)**
Comprehensive knowledge of HIV		
No (Ref)	1.00	1.00
Yes	1.60 (0.84, 3.03)	2.02 (1.01, 4.06)
Multiple sexual partnerships in the last 12 months		
No (Ref)	1.00	1.00
Yes	2.29 (1.22, 4.30)*	5.76 (2.62, 12.66)***
Ever had transactional sex		
No (Ref)	1.00	1.00
Yes	2.16 (0.98, 4.75)	1.32 (0.54, 3.23)

*p < 0.05, **p < 0.01, ***p < 0.001; Ref: Reference Category

DISCUSSION OF FINDINGS

Socioeconomic Vulnerabilities among OSYP

OSYP are young men and women who have dropped out of school and often tagged as illiterates, “area boys”, “street urchins”, uneducated, and unimportant. Some are beyond parental control, adopting unsafe behaviours which expose them to hard drug addiction, STIs (including HIV), alcohol use, rape, and gambling among others. They are often found in a variety of settings, including ghettos, uncompleted buildings, hotels, bars, beer parlors, market places, weddings, and village squares. Due to joblessness and idleness, OSYP congregate at places labelled as “hot spots” with people of similar status to discuss, gossip, plan, and engage in societally unacceptable activities.

The enormous increase in the number of OSYP in society poses a challenge to the family and society. As a necessary prerequisite to national development, their education is important and needs to be given due consideration, especially as the UN Convention on the Rights of the Child stipulates that every child has the right to an education for the fullest development of their “personality, talents, mental, and physical abilities.”²³ Education enhances the economic and intellectual wellbeing of youth. However, the socioeconomic background of some young people has contributed to being out of school.

Gender segregation has constrained females from getting an education in some communities. Findings from northern Nigeria indicate that some parents are not interested in girl-child education. Their choices may be informed by their own educational status as lack of education of parents can influence the decision on whether to provide their children with an education or not, and a major reason for keeping children out of school.²⁴

Being uneducated is a major setback for OSYP as education is the primary means through which people are empowered to increase the economic, social, and personal well-being of all citizens in a society.²⁵ Due to the lack of comprehensive formal education, OSYP do not benefit from public privileges. They lack basic education and are most times unskilled, marginalized, and incompetent in accessing economic opportunities.²⁶ The acquisition of a good education will improve their chances of securing a good job as well as earn a liveable wage to support themselves and their families. Without an education, OSYP cannot effectively contribute to the development of their community since it is well-educated people that can make use of their knowledge and skills to solve the country’s problems.²⁷

While it is expected that OSYP may not have the requisite academic degrees to enable them to pursue careers in the organised formal sector, policies that encourage entrepreneurial growth, especially in the service industries will be a viable way to engage OSYP. Overall, less than 20 percent of OSYP in this study had full-time jobs. This highlights the economic difficulties they may face on a daily basis. While having full-time employment does not necessarily translate into earning a livable wage, it provide a means of constructively engaging and providing opportunities for capacitating OSYP to learn hands-on technical trades such as auto-servicing, plumbing, catering, metal fabrication, which will ensure a more secure future for them. Their lack of income also raises the spectre that they may easily be lured into illegal sexual and social activities substance use, sex work, sale of drugs, and robbery which may further increase their vulnerability to societal ills. This is more so as less than 50

percent of OSYP live with both parents implying that essential parental guidance needed in the growing years of young persons are lacking for many OSYP. The low employment rate may also be linked to the low food security observed in this study—less than two-thirds of the respondents were able to afford three meals through a given month.

Alcohol, Cigarette and Psychoactive Substance Use

Alcohol and drug use impair sound judgment in making informed sexual decisions and this has been linked to increased risk to HIV and AIDS. Overall use of alcohol, cigarette smoking, and psychoactive drug use was about 10 percent. Alcohol (11 percent vs. 4 percent), cigarette (17 percent vs. 2 percent), and psychoactive drug (18 percent vs. 2 percent) use were higher among male than females. In a society which emphasizes male dominance, male OSYP are encouraged more to engage in income-generating activities than females, which may inadvertently expose them early on to older men who engage in high-risk social activities.

Sexual Risk Behaviours among OSYP

Being out of school increases high-risk behaviours, which influences OSYP's relationships, sexual behaviours, risk taking, HIV testing, and health-seeking behaviours. Relationships with family and community members can be severed as OSYP adopt and engage in risky activities which further worsens their vulnerability to unsafe and higher-risk sexual behaviours such as rape, unprotected sex, and multiple sexual partners, which exposes them to health hazards, including HIV.

Overall, OSYP in this study can be described as sexually active given that 85 percent of respondents had had vaginal sex in the 12 months prior to the survey and about 5 percent had had anal sex. Studies have consistently demonstrated the link between early sexual debut and STIs due to prolonged exposure to sex. OSYP in the SS region had the lowest median age of sexual debut (15 years). In addition, they had the highest proportion of respondents whose sexual debut was before age 15 years (45 percent). Lowest proportion of sexual debut before age 15 years was in the NW region (7 percent). More OSYP males (23 percent) than females (17 percent) had their sexual debut before age 15 years contrary to findings from the general young person population where 17 percent of young women and 3 percent of young men aged 15–24 years initiated sexual activity before age 15.²⁸ The reason for female OSYP having the same prevalence as the general young person population is unclear, however, the much higher prevalence of early sexual debut among male OSYP compared to the general male young person population is alarming and requires further research as well as urgent implementation of prevention interventions for them.

Transactional sex remains a potent mechanism for driving the epidemic. About 14 percent of the respondents—comprising more females than males (19 percent vs. 11 percent)—had engaged in transactional sex. At the regional level transactional sex ranged from 7 percent in the NW to 26 percent in the SS. In addition, transactional sex was higher in urban areas (16 percent) compared to the rural areas (13 percent). Given the low socioeconomic status of female OSYP, there is the risk that their condom negotiating skills will be low and further weakened if clients offer more money for engaging in unprotected sex. Only about a third of female OSYP had exposure to prevention interventions in the 12 months prior to the survey. Further research is needed to evaluate the quality, type, and dosage of HIV prevention interventions to improve knowledge and change behaviours among female OSYP. Evidence-based interventions focused on transactional sex are needed in both

urban and rural areas as occasional transactional sex can develop into full-time sex work. This leads to the pressure to sustain income generated via sex work which usually involves movements between locations, further exposing them to risk as well as increasing transmission or acquisition of HIV.

Another known sexual risk behaviour that increases risk to HIV transmission is multiple sexual partnerships. Overall, 37 percent of respondents had engaged in multiple sexual partnerships and more males than females (50 percent vs. 20 percent) had engaged in multiple sexual partnerships. Multiple sexual partnerships was higher in urban than rural areas (40 percent vs. 34 percent) and ranged from 26 percent in the NC region to 42 percent in the NE region. Prevention interventions that focus on partner reduction among OSYP are required.

Condom Use

Consistent and correct condom use has been shown to be an effective preventive strategy for HIV, STIs, and unwanted pregnancy prevention. Overall, ever condom use was 75 percent among OSYP, while current condom use during sex was 58 percent. This suggests that there is still more to be done to increase condom use among OSYP. Proportion of those currently using condoms was similar for both urban and rural dwellers (68 percent). However, condom use was higher among males (82 percent) than females (68 percent). At the regional level, condom use ranged from 54 percent in the NE to 79 percent in the NW. Condom use at last high-risk sex was low (58 percent), and higher among males than females (65 percent vs. 47 percent). It was also higher in urban compared to rural areas (64 percent vs. 53 percent). Condom use at last high-risk sex ranged from 50 percent in the SS to 84 percent in the NW. Programmes enhancing condom negotiating skills are required to increase condom use among OSYP. Furthermore, efforts should be geared towards ensuring that consistent condom use is practiced among OSYP. In addition, though condom messaging and the use of non-traditional outlets for sale and distribution of condoms have significantly increased in the last four years, this study highlights a programming gap which implies that effort needs to be sustained and reinforced to increase the overall use of condoms by OSYP.

Comprehensive HIV Knowledge

The UNAIDS measure of comprehensive knowledge includes respondents providing correct answers to three know methods of preventing the transmission of HIV as well as rejecting two misconceptions of HIV transmission. Overall, comprehensive HIV knowledge was low with only about 30 percent of OSYP providing correct answers to the five questions that measure comprehensive HIV knowledge. This low level of knowledge may be linked to social normative barriers that discourage them from seeking information from reliable sources such as health facilities or known HIV prevention programmes as association with such programmes indicates that one may have begun sexual activities. Also, the persistence of cultural silence on sex and its moral stigmatization may also contribute to OSYP's poor comprehensive knowledge of HIV as they are not availed sexuality education early enough in their formative years to guide their sexual choices. The low proportion of OSYP with comprehensive knowledge was observed among both males and females, urban and rural settings, and across geo-political zones. This suggests that there are deep rooted sociocultural factors that inhibit sexual education. To address this, intervention programmes that increase OSYP's knowledge of HIV and STIs must be urgently developed and implemented across the country.

OSYP are unlikely to access health care and HIV services, partly because of their lack of knowledge about the importance of these services. HIV education and enlightenment is most times not beneficial to OSYP because the programmes are often in-school and they are not specifically organised for OSYP. Information disseminated through the media may not also be accessible by all since some communities have irregular or no electricity and/or communication networks.

HIV Risk Perception

Perception (a hybrid of belief and attitude) is assumed to predict behaviour.²⁹ Risk perception refers to people's beliefs about their vulnerability to danger or harm.³⁰ Perception of health risk is a key dimension of most health behaviour models^{31,32} used to construct health promotion campaigns particularly those targeting HIV-related risk behaviours.²⁹ OSYP have a very low level of HIV risk perception. Overall, only 6 percent of OSYP felt that they had a high chance of contracting HIV. This low prevalence was consistent among males (7 percent) and females (4 percent) and in urban (7 percent) and rural settings (5 percent). At the regional level, HIV risk perception ranged from 2 percent in the NW to 12 percent in the SE.

Numerous theories in social and health psychology including the psychometric paradigm^{33,34} the health belief model,³⁵ the parallel process model,³⁶ protection motivation theory,³⁷ the extended parallel process model,³⁸ the precaution adoption process model,³⁹ and the prototype/willingness model,⁴⁰ accord risk perception a central role in determining behaviour. Furthermore, heightening other components of risk appraisal achieves a larger impact on intention and behaviour. de Hoog et al. showed that heightening severity of a threat, regardless of the medium of communication (e.g., use of scary images) was associated with a positive and significant effect on intention and behaviour change.⁴¹ The low HIV risk perception may also be as a result of low comprehensive HIV knowledge. The application of tested behaviour change models that heighten risk perception are thus strongly recommended to increase HIV risk perception among OSYP and thus provoke the necessary behaviour changes required to reduce HIV transmission.

HIV Counselling and Testing

HIV counselling and testing is a key intervention strategy for effective HIV control in most developing countries including Nigeria.⁴² It increases access and knowledge of HIV status, encourages safer sex, and is an entry point for HIV care treatment and support services.⁴² Several studies have highlighted the potential benefits of knowing one's HIV status through HCT including the adoption of risk reduction strategies (correct and consistent condom use, reduction of sexual partners), accessing palliative care, psychosocial support, and ARV treatment, all resulting in increased survival and labor productivity.⁴³⁻⁴⁸

Overall, only 34 percent of OSYP had ever been tested for HIV and received their result—with slightly more females than males (36 percent vs. 33 percent). HCT uptake was higher among OSYP in urban areas (42 percent) compared to those in rural areas (27 percent). At the regional level it ranged from 22 percent in the SW to 59 percent in the NC. The desire or willingness to test measures the testing gap in the system and programmatically shows what can be achieved if appropriate resources are deployed in increasing demand for HCT. About 96 percent of OSYP expressed their desire to undergo HCT. This finding was consistent among both males and females and also among those in urban and rural settings. The national target is to provide HCT to 80 percent of the population by

2015. While the number of OSYP in Nigeria is unknown, targeting this group and providing HCT may be a viable avenue to significantly boost the uptake rate of HCT.

While effective HIV services can mainly be accessed in health facilities located in urban areas, religious organisations play an important role in enhancing the health and well-being of community people. They provide awareness programmes on adolescent sexual and reproductive health (SRH) while NGOs organise educational programmes on HIV services and free HIV testing. However, SRH programmes in hospitals and health centers are mainly accessed by married people. In addition, HIV services are more accessible to urban dwellers. Rural dwellers find it difficult to access quality HIV services because efficient, effective, and well-equipped service centers are located in areas far removed from their localities. Effective HIV services are constrained by stigmatization and discrimination. Discrimination is the societal response to the negative value attached to the stigma an individual may carry.⁴⁹ People living with HIV and AIDS are tagged, labelled, and dissociated from in society. As adults, infected young persons are ridiculed, avoided, and neglected by friends and families. The shame from stigma and discrimination have negative effects on OSYP living with HIV because they lack self-confidence and are physically, socially, medically, and psychologically affected. HIV and AIDS stigma also affects individual's access to health services. Education and enlightenment can help reduce stigmatization and discrimination of OSYP living with HIV. Furthermore, OSYP may not access HIV services because they are afraid of discovering their positive status. Unequipped facilities and inexperienced health workers hinder successful delivery of HIV services.

Gender-based Violence

Gender-based violence remains a social ill that has not received much attention from the government. While Nigeria is a signatory to regional and international treaties which have the potential to reduce the HIV-related vulnerabilities of young Nigerians, e.g., the African Charter on Human and People's Rights, CEDAW, Maputo Protocol, Nigeria has failed to domesticate them or has laws that violate such treaties and protocols. Sexual offense laws in Nigeria do not contain provisions for spousal rape yet according to the 2008 NDHS, 3 percent of married women between the ages of 15 and 49 have experienced spousal rape.⁵ Overall, one-fifth of female respondents had been touched against their will, 10 percent had been deceived into having sex, 9 percent reported being raped by their spouses, and 8 percent had been beaten because they refused to have sex. The non-provision of spousal rape presents a double jeopardy for these young women as they usually have no channel for reporting these cases and thus are exposed to both physical and psychological trauma which increases their vulnerability as they have no safe sex negotiating power during these events. The stigma associated with being raped is also very high and there have been cases where parents refuse to take legal action as it may bring shame to the family and the girl in question.

The presence of legal pluralism contributes significantly, in maintaining a sociocultural environment that heightens the HIV and SRH vulnerabilities of young Nigerian girls. National laws criminalizing gender based-violence are absent and some federal laws allow violence against women.⁵⁰ For example, the penal code, which is used in Northern Nigeria, allows husbands to use physical means to censure their wives as long as it does not cause "grievous harm," which is defined as loss of sight, hearing, speech, facial disfigurement, or life-threatening injuries.⁵⁰ Penalties for the sexual assault of a man exceed the penalties for the same offense against a woman.⁵⁰

1. Any person who unlawfully and indecently assaults any **male person** is guilty of a **felony**, and is liable to **imprisonment for three years**. (*Chapter 29, Section 353, Criminal Code, Laws of the Federation of Nigeria*).
2. Any person who unlawfully and indecently **assaults a woman or girl** is guilty of a **misdemeanour**, and is liable to imprisonment for **two years** (*Chapter 30, Section 360, Criminal Code, Laws of the Federation of Nigeria*).

Furthermore, only five out of thirty-six states (Ekiti, Ebonyi, Jigawa, Cross River, and Lagos) have laws aimed at punishing domestic violence (defined as violence occurring in the home between persons who live or have lived together including but not limited to physical or sexual abuse/exploitation; starvation; emotional, verbal, and psychological abuse; economic abuse and exploitation; denial of basic education; intimidation; harassment; hazardous attack including acid bath or offensive substances; deprivation; and any other controlling or abusive behaviour towards a complainant.⁵¹ Thus, OSYP who constitute a significant proportion of the population as “domestic helps” or support staff, do not have any federal legal backing if and when they are abused.⁵⁰

Regional Variations in HIV Prevalence among OSYP in Nigeria

This study reports significant heterogeneity in HIV prevalence among OSYP in Nigeria (Table 22). With a national HIV prevalence of 3 percent, OSYP in northern Nigeria have a HIV prevalence higher than the national average. Among the northern regions, HIV prevalence was 3.3 percent in NC, 3.9 percent in NE, and 3.7 percent in NW. In the southern regions, HIV prevalence was 1.3 percent in SS, 0.5 percent in SW, and zero among OSYP in SE. In addition, OSYP from the northern region were at least seven times more likely to be HIV positive when compared to those in SW Nigeria. The higher prevalence of HIV in the northern region requires further investigation given that known risk factors for HIV transmission, e.g., multiple sexual partnerships, low/inconsistent/incorrect condom use, and earlier sexual debut, are largely different from the southern region.

Globally, females have a higher risk to HIV than males primarily because of the anatomy of the mucosal lining of the vagina that is easily bruised. The findings in this study show that the HIV prevalence among female OSYP of 3.6 percent is about six times higher than in male OSYP (0.6 percent) and females are seven times more likely to be HIV positive than their male counterparts. Though females are biologically more predisposed to acquiring HIV, the large difference in prevalence raises a cause for alarm. The higher prevalence of HIV among female OSYP may be a direct reflection of the increase in HIV among females adolescents from 1.7 percent in 3 percent between 2007 and 2012.⁵² Consequently it may reflect the increased vulnerability of female young persons due to their lower socioeconomic status and poorer educational status and thus lack of constructive engagement in the society. Thirty-nine percent of female OSYP compared to 24 percent of male OSYP were unemployed, while 29 percent and 43 percent of female and male OSYP, respectively, were self-employed. In addition, the lack of HIV prevention services targeted at OSYP may be contributory. A study in South Africa showed that girls who participated in a community group were significantly less likely to be sexually experienced and more likely to have used a condom at last sex.⁵³ Another study showed that girls who belonged to sports clubs were less likely to test positive for HIV than girls not engaged in sports clubs and more likely to negotiate condom use with their partners.⁵⁴ This urgently calls for evidence-based interventions to mitigate the transmission of HIV within OSYP networks and from female OSYP to the general population.

In addition, respondents in rural locations also had a higher burden of HIV as evidenced by the higher HIV prevalence in rural (2.6 percent) than in urban (1 percent) areas. Furthermore, respondents in rural settings were six times more likely to be HIV positive than their urban counterparts and brings to the forefront the burden of HIV in rural Nigeria. This higher HIV prevalence in rural areas may be as a result of sub-optimal HIV programming in rural areas. Furthermore, it may reflect the neglect of these areas in the broader scope of HIV interventions. It may also reflect the lack of acceptance of HIV prevention interventions as cultural norms which go against premarital sex in the rural areas are much stronger than in the urban areas. Thus, although respondents in rural areas also engage in risky sexual behaviour, they are removed from existing behaviour change communication intervention programmes. Consequently OSYP in rural areas remain ill-equipped to deal with sex and their sexuality.

Those who engaged in multiple sexual partnerships were six times more likely to be HIV positive than those who did not and highlights the potential for a mega epidemic and sustained propagation and transmission within this subpopulation through sexual networking. Prevention programmes to reduce multiple sexual partnerships and increase consistent and correct use of condoms are urgently needed. Interventions must also develop strategies to heighten risk perception to HIV among OSYP which has been shown to increase sustained adoption of risk reduction practices.³⁶ The higher risk of HIV identified among those with comprehensive HIV knowledge is intriguing and merits further discussion. This higher likelihood of HIV infection among those with comprehensive HIV knowledge may be a result of increased exposure to health workers and HIV programmes among those who are already HIV positive (reverse causation). Thus, their increased knowledge does not translate into higher HIV risk but reflects the impact of HIV prevention programmes on their HIV knowledge.

Table 22 Regional differentials in HIV prevalence, risks and prevention-related outcomes among OSYP

Indicators	NC %	NE %	NW %	SE %	SS %	SW %	All %
HIV prevalence	3.3	3.9	3.7	0.0	1.3	0.5	1.9
Comprehensive knowledge of HIV	17.3	40.4	28.1	13.0	35.2	37.3	29.7
High-risk sex	60.6	55.7	18.9	43.6	60.9	53.0	49.4
Condom use at last high-risk sex	56.5	59.6	91.2	66.4	71.1	55.1	62.4
Uptake of HTC	61.6	29.0	34.8	36.5	46.6	24.5	37.0
Median age at sexual debut (Years)	17	16	17	18	15	17	17
Sexual debut before age 15	14.7	19.1	7.0	14.2	44.7	15.2	19.9
No HIV self-risk perception	31.2	21.0	58.6	44.6	48.7	47.8	42.7
Low HIV self-risk perception	57.6	62.7	28.1	40.9	40.0	43.5	47.0
Ever had anal sex	5.5	6.8	4.3	2.9	8.1	4.9	5.4
Ever had transactional sex	16.1	19.9	7.0	8.1	26.0	8.6	14.3
Ever used psychoactive drugs	3.6	15.6	9.6	6.2	20.2	8.9	10.4

High-risk sex= Non-marital sex; Transactional sex: Sex in exchange for gift, favour or money

The research examined societal perception of OSYP; prevalence of unprotected sexual risk behaviours, alcohol and recreational drug use among OSYP; factors associated with high-risk behaviours; and HIV prevalence estimates and factors that increase vulnerabilities of OSYP to HIV in Nigeria. The study also identified the barriers and challenges to accessing HIV services among OSYP. Findings reveal that being uneducated made OSYP more likely to participate in high-risk behaviours that can affect their health and health seeking behaviours. They are unable to access HIV educational services because the programmes are school-based and there are no specific programmes targeted at

OSYP on HIV prevention interventions. Parents, older community members, and religious organisations enlighten adolescents on SRH.

To successfully enhance adolescent and young persons' health and wellbeing, there is need to address the issue of OSYP in the society. Programmes geared towards educating OSYP on HIV prevention and interventions should be organised since they are cut off from the popular school-based HIV educational programmes. Such HIV intervention programmes must include approaches to reducing stigma and putting a stop to discrimination. Community-based organisations should be encouraged to implement programmes/activities to further enlighten people, while hospitals and testing centers should be provided within the community to reduce the challenge of traversing long distances for HIV service access.

In order to improve HIV services for OSYP, it is important to scale up youth-focused prevention efforts. In achieving this, there is need to adopt youth-friendly approaches to HIV services as recommended by the study participants. Since OSYP lack full understanding of HIV services because of their out-of-school status, intervention programmes should target the factors responsible for the increased number of OSYP. The government should provide assistance to OSYP that desire a formal education but are financially constrained and establish vocational training centers for those who are not interested in formal education. There is also need for infrastructure development in some communities, which lack electricity, good roads, drinkable water, and communication networks.

OSYP can also be gathered and educated on HIV prevention and care, while volunteers can be brought to the communities, especially rural communities, to enlighten community members with tailored behaviour change messages. It was suggested that parents educate their children on how to live a life free of risky behaviours for improved health and well-being. Community and religious leaders are well respected in the society and at times sought out for advice hence, they should be engaged in playing advisory roles for youths.

HIV educational programmes should be geared towards enhancing youth accessibility to HIV services and workshops should be organised to educate youths. It was suggested that interactive programmes that address HIV and adolescent SRH, such as drama series, be provided on television and radio. As stigmatization hinders effective utilization of HIV services, enlightenment programmes should be organised to explain the dangers of discrimination while those that discriminate against people living with HIV need to be enlightened to stop stigmatization.

This study was not without limitations. It was a cross-sectional study hence, the findings should be interpreted with caution. The recruitment strategy of interviewing OSYP found at selected hot spots results in some selection bias as OSYP with higher risks behaviour may have been oversampled in this study. More rural than urban dwelling OSYP were recruited in this study and thus there may have been an overrepresentation of a more disadvantaged group, as the rural region are worse off socioeconomically and have been less impacted by HIV prevention interventions over the years.

CONCLUSION AND RECOMMENDATIONS

This study highlights key vulnerabilities experienced by OSYP in Nigeria. Failure in implementing relevant policies has left them both educationally and economically disadvantaged. The UN Convention on the Rights of the Child states that every child has the right to an education that develops their “personality, talents and mental and physical abilities to their fullest potential.”²³ Education remains the major tool by which people are empowered and increase the economic, social, and personal well-being of all citizens in a society. Unemployment and poor food security are powerful combination of environmental stressors that heighten the vulnerabilities of this subpopulation.

Female OSYP are more exposed to these vulnerabilities than their male counterparts which further exacerbates their risk of contracting STIs including HIV. They have limited access to relevant sexual and reproductive health information to make informed decisions. Furthermore, the lack of Federal Laws that protect women, servants, and children against domestic violence worsens the plight of female OSYP in Nigeria.

The early sexual debut, multiple sex partnerships, and transactional sex identified in this study present a complex prevention need for OSYP across Nigeria. In addition, the low use of condoms at last high-risk sex is an indication that consistent condom use, which has been shown to be protective against HIV, is much lower among OSYP.

Low comprehensive HIV knowledge suggests that OSYP may be ill-equipped to comprehensively assess their HIV risk perception and may explain the sexual risk behaviours exhibited by OSYP. In addition, the low proportion of OSYP that have ever been tested and received their results, shows the gap in unmet needs in providing basic sexual health services for this group. The role of HCT in promoting the adoption of risk reduction strategies (correct and consistent condom use, reduction of sexual partners) and practice of safer sex is well known, yet it is a prevention strategy begging to be effectively deployed to scale.

Lastly, the heterogeneity of HIV prevalence among respondents in northern Nigeria having higher HIV prevalence compared to their southern counterparts calls for further research to determine factors driving the epidemic among OSYP in this region. The much higher HIV prevalence among females and OSYP in rural areas also raises a cause for alarm and indicates that aggressive evidence-based programming is needed to identify female OSYP living with HIV and ensure that they are enrolled in HIV and STI prevention, care, and treatment services.

Based on the findings in this study, the following recommendations are proposed:

1. Inclusive policies by the appropriate ministries, department and agencies that identify and provide capacity building for OSYP in the area of job training and skill acquisition are required
2. Legal pluralism must be eliminated and national, sub-national, civil and customary laws must align with each other. Furthermore laws and policies should not be contradictory and implementation of existing youth-specific laws and policies need to be improved.
3. HIV prevention programmes to reduce sexual risk behaviours among OSYP are urgently needed.
4. There is a need for advocacy to state governments to adopt and domesticate Federal Laws which protect all young people including OSYP.

5. Designing appropriate interventions which heighten other components of HIV risk appraisal and thus achieve larger impact on intention and behaviour are urgently needed.
6. HIV counselling and testing that targets OSYP is required to meet the testing gap and also identify and links persons living with HIV to appropriate comprehensive care and treatment.
7. HIV stigma remains high and may limit the number of OSYP who will opt for HCT even when availed free of charge. Destigmatization campaigns are urgently needed and should be delivered in a language and format that will induce the desired change.
8. States must create a gender sensitive and confidential medium for female OSYP to be able to report gender-based violence and seek legal address if their sexual rights are violated.
9. Condom programming must be culturally sensitive and target OSYP in their immediate geographic locations as cultural limitations may not avail them the opportunity to participate in the regular methods of prevention interventions used in Nigeria.
10. Harm reduction and addiction services should be made accessible and affordable for OSYP so that long term effects of psychoactive substances, alcohol and cigarettes can be avoided.
11. Further research is required to determine factors driving the epidemic in northern Nigeria.

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APPENDIX 1: LIST OF CONTRIBUTORS

Study Team

Sylvia Adebajo, Principal Investigator—Population Council/ENR
Waimar Tun, Co-investigator—Population Council, Washington, DC
George Eluwa, Co-investigator—Population Council, Nigeria
Omokhudu Idogho, Co-investigator—Society for Family Health/ENR
Jennifer Anyanti, Co-investigator—Society for Family Health/ENR
Wole Fajemisin, Co-investigator—Population Services International/ENR
Olusegun Sangowawa, Study Coordinator—Population Council, Nigeria
Jean Njab, Study Coordinator—Population Council, Nigeria
Ayodeji Oginni, Data Analyst—Population Council, Nigeria
Sherry Hutchinson, Editor—Population Council, Washington, DC
Elizabeth Shoyemi, Field Supervisor—Population Council, Nigeria
Lolade Abiodun, Field Supervisor—Population Council, Nigeria
Desmond Iriaye, Field Supervisor—Population Council, Nigeria

Study Partner Organizations

Global Health and Social Awareness (GHSA)—Adamawa
Jireh Doo Foundation (JDF)—Benue
Neighborhood Care-Well Foundation (NCF)—Cross River
Global Health Awareness and Research Foundation (GHARF)—Enugu
Kind Heart Initiative (KHI)—Kaduna
Nigeria Youth Aid Programme (NYAP)—Lagos

Study Monitoring Ministries/Departments/Agencies

Adamawa State Agency for HIV and AIDS Control (ADSACA)
Benue State Agency for the Control of HIV and AIDS (BENSACA)
ENR Benue State
Cross River Agency for the Control of AIDS (CRSSACA)
ENR Cross River State
Kaduna State Agency for the Control of HIV and AIDS (KADSACA)
ENR Kaduna State
Lagos State Agency for the Control of HIV and AIDS (LSACA)
ENR Lagos State

Study Assistants

Madanga Martins—Adamawa State
Alvindhia Fala—Adamawa State
Alfraid Patience—Adamawa State
Samaila Daniel—Adamawa State

Abraham Kwaghgee—Benue State
Onwurah Chinedu—Benue State
Julie Achetu Onche—Benue State
Obaka Josiah—Benue State
Emah-Emah Victoria—Cross River State
Ekong Basseyy Cletus—Cross River State
Manyi Eno Mary—Cross River State
Emah-Emah Emerald Albert—Cross River State
Mbakwe Chinyere—Enugu State
Nwokeoma Bonaventure—Enugu State
Eze Emeka—Enugu State
Amah Chioma—Enugu State
Suleiman Isah—Kaduna State
Moru Joseph—Kaduna State
Jimoh Halima—Kaduna State
Fagbemi Adekunle Johnson—Kaduna State
Ezechiedo Kevin—Lagos State
Adeosun Haruna—Lagos State
Akinwamide Tope—Lagos State
Okoroh Mezino—Lagos State

APPENDIX 2: ADDITIONAL DEMOGRAPHIC AND BEHAVIORAL INFORMATION

Tables A1 through A16 provide additional descriptive demographic and behavioural information about the respondents.

Table A1 Mobility

Percent distribution of all respondents, who had been away from away from home for more than one month in the last 12 months prior to survey according to selected background characteristics

	Proportion of respondents who had been %	Total number of respondents
Age		
15–19	26.5	843
20–24	29.4	1,263
Sex		
Male	30.2	1,124
Female	26.0	982
Marital status		
Currently married/cohabiting	25.6	273
Never married	28.4	1,803
Formerly married	50.0	20
Education		
None	18.9	196
Qur'anic only	60.0	10
Primary	22.5	409
Secondary	30.2	1,404
Higher	36.8	76
Religion		
Islam	27.7	419
Non-Catholic Christian	25.6	1,054
Catholic Christian	32.1	549
Others	38.1	84
Region of residence		
NC	39.4	307
NE	35.5	307
NW	41.7	302
SE	29.0	307
SS	28.3	307
SW	10.8	576
Location of residence		
Urban	32.6	876
Rural	25.0	1,230
Total	28.2	2,106

Table A2 Median age at first sex

Median age at first sex according to selected background characteristics

	Median age at first sexual experience
Age	
15–19	16.0
20–24	17.0
Sex	
Male	16.0
Female	17.0
Marital status	
Currently married/cohabiting	17.0
Never married	16.0
Formerly married	15.0
Education	
None	15.0
Qur'anic only	17.0
Primary	16.0
Secondary	17.0
Higher	18.0
Religion	
Islam	17.0
Non-Catholic Christian	16.0
Catholic Christian	17.0
Others	17.0
Region of residence	
NC	17.0
NE	16.0
NW	17.0
SE	18.0
SS	15.0
SW	17.0
Location of residence	
Urban	17.0
Rural	16.0
Total	17.0

Table A3 Knowledge of male condoms

Percentage distribution of all respondents who have ever heard of condom according to selected background characteristics

	Proportion who had heard of condoms %	Total number of respondents
Age		
15–19	89.9	843
20–24	96.7	1,263
Sex		
Male	96.4	1,124
Female	91.2	982
Marital status		
Currently married/cohabiting	95.6	273
Never married	93.8	1,803
Formerly married	90.0	20
Education		
None	86.7	196
Qur'anic only	60.0	10
Primary	89.2	409
Secondary	96.5	1,404
Higher	98.7	76
Religion		
Islam	88.3	419
Non-Catholic Christian	95.0	1,054
Catholic Christian	95.6	549
Others	98.8	84
Region of residence		
NC	95.1	307
NE	93.5	307
NW	86.1	302
SE	95.8	307
SS	98.0	307
SW	94.6	576
Location of residence		
Urban	96.6	876
Rural	92.1	1,230
Total	94.0	2,106

Table A4 Condom accessibility and affordability

Percent distribution of respondents who have heard of male condoms and who agreed that condoms are easy to obtain or agree that condoms are affordable according to selected characteristics

	Agreed that male condoms are easy to obtain %	Agreed that condoms are affordable %	Number of respondents who have heard of the male condom
Age			
15–19	70.1	69.7	758
20–24	79.9	79.0	1,221
Sex			
Male	79.4	83.2	1,083
Female	72.1	66.0	896
Marital status			
Currently married/cohabiting	75.5	73.2	261
Never married	76.0	75.8	1,692
Formerly married	94.4	72.2	18
Education			
None	72.9	79.4	170
Qur'anic only	100.0	83.3	6
Primary	68.8	67.9	365
Secondary	77.3	75.9	1,355
Higher	94.7	92.0	75
Religion			
Islam	78.9	87.6	370
Non-Catholic Christian	75.7	71.9	1,001
Catholic Christian	75.2	73.1	525
Others	73.5	77.1	83
Region of residence			
NC	80.5	72.9	292
NE	62.4	68.3	287
NW	68.5	88.1	260
SE	66.3	63.6	294
SS	73.4	56.5	301
SW	91.4	91.2	545
Location of residence			
Urban	81.4	79.9	846
Rural	72.1	72.0	1,133
Total	76.1	75.4	1,979

Table A5 Opinion on male condom efficacy

Percent distribution of respondents who have heard of male condoms and who agree to selected statement on condom efficacy according to selected characteristics

	Agreed that male condoms protect against unplanned pregnancy %	Agreed that male condoms protect against HIV %	Agreed that male condoms protect against STIs %	Number of respondents who have heard of male condom
Age				
15–19	87.1	86.8	81.1	758
20–24	92.2	92.1	88.0	1,221
Sex				
Male	92.0	92.2	87.6	1,083
Female	88.2	87.6	82.6	896
Marital status				
Currently married/cohabiting	92.3	90.4	87.0	261
Never married	89.9	90.0	85.0	1,692
Formerly married	88.9	100.0	100.0	18
Education				
None	88.8	85.9	84.1	170
Qur'anic only	100.0	83.3	83.3	6
Primary	92.1	91.0	83.8	365
Secondary	89.6	90.3	85.5	1,355
Higher	96.0	93.3	92.0	75
Religion				
Islam	88.1	92.4	89.5	370
Non-Catholic Christian	92.3	89.7	85.9	1,001
Catholic Christian	88.6	86.7	81.9	525
Others	85.5	86.7	81.9	83
Region of residence				
NC	90.8	91.8	75.7	292
NE	92.3	82.6	80.1	287
NW	83.1	90.0	86.9	260
SE	84.7	85.0	83.7	294
SS	89.4	91.0	83.1	301
SW	95.8	95.4	94.7	545
Location of residence				
Urban	91.1	91.5	88.4	846
Rural	89.6	89.1	83.1	1,133
Total	90.2	90.1	85.3	1,979

Table A6 Current status of male condom use

	Have been using male condoms for sometime %	Used male condoms in the past no longer using %	Ever used, stopped but have resumed %	Just started using for the first time %	No response %	Number of respondents who have ever used male condom
Age						
15–19	67.9	21.4	5.8	3.9	1.0	308
20–24	68.7	20.5	6.3	3.7	0.8	859
Sex						
Male	72.1	16.7	6.6	3.7	0.9	695
Female	63.1	26.7	5.5	3.8	0.8	472
Marital status						
Currently married/cohabiting	48.0	43.4	2.9	5.2	0.6	173
Never married	72.9	15.8	6.9	3.5	0.9	974
Formerly married	28.6	64.3	0.0	7.1	0.0	14
Education						
None	72.0	24.0	2.7	0.0	1.3	75
Qur'anic only	50.0	0.0	0.0	0.0	50.0	2
Primary	64.9	22.7	6.5	5.4	0.5	185
Secondary	67.5	20.9	6.8	4.0	0.8	834
Higher	85.9	10.9	1.6	1.6	0.0	64
Religion						
Islam	72.3	21.5	2.6	2.1	1.6	191
Non-Catholic Christian	68.6	19.3	8.5	3.0	0.6	627
Catholic Christian	68.2	23.3	3.6	3.9	1.0	305
Others	52.3	20.5	6.8	20.5	0.0	44
Region of residence						
NC	66.9	24.6	2.9	4.6	1.1	175
NE	53.6	19.0	20.7	5.0	1.7	179
NW	79.4	15.4	2.9	1.5	0.7	136
SE	61.5	21.7	4.9	9.8	2.1	143
SS	65.2	22.9	7.6	3.8	0.5	210
SW	78.1	20.1	0.9	0.9	0.0	324
Location of residence						
Urban	68.9	17.6	7.1	4.2	1.2	566
Rural	68.1	22.8	5.3	3.3	0.5	601
Total	68.5	20.7	6.2	3.8	0.9	1,167

Table A7 Knowledge of HIV prevention methods

Percent distribution of respondents' knowledge of ways of preventing HIV infection according to selected characteristics

	Stay with one uninfected partner %	Consistent use of condom %	Abstinence %	Delay sexual debut %	Avoid sex with sex workers %	Reduce the number of sexual partners %	Avoid sharing sharp objects %	Number of all respondents
Age								
15–19	76.4	82.8	83.3	42.7	67.9	60.7	85.2	843
20–24	84.4	90.7	85.4	47.6	73.2	65.6	90.0	1,263
Sex								
Male	79.4	89.9	83.9	44.5	72.2	63.9	89.4	1,124
Female	83.3	84.9	85.3	46.9	69.9	63.4	86.6	982
Education								
None	76.5	78.1	80.1	56.1	74.0	64.8	84.2	196
Qur'anic only	60.0	50.0	90.0	20.0	40.0	40.0	100.0	10
Primary	78.5	84.8	82.4	42.8	68.7	60.6	84.8	409
Secondary	82.8	89.5	85.8	45.0	71.4	64.5	89.2	1,404
Higher	86.8	96.1	88.2	48.7	80.3	71.1	96.1	76
Religion								
Islam	77.6	85.0	83.5	51.8	74.9	69.2	88.3	419
Non-Catholic Christian	85.9	89.7	85.9	44.8	73.0	65.7	88.2	1,054
Catholic Christian	77.0	86.0	84.2	43.9	65.2	56.3	88.2	549
Others	67.9	84.5	76.2	36.9	66.7	58.3	84.5	84
Region of residence								
NC	87.9	90.6	82.7	49.5	70.0	58.6	88.3	307
NE	93.2	89.3	92.5	42.7	83.4	82.1	84.0	307
NW	67.9	83.1	75.8	44.0	61.9	56.6	85.4	302
SE	64.2	74.9	79.5	39.4	59.6	49.2	88.9	307
SS	83.1	93.5	80.5	36.5	52.1	48.5	86.3	307
SW	86.3	91.0	90.8	54.2	86.1	76.0	92.0	576
Location of residence								
Urban	81.4	89.3	84.2	46.2	67.4	62.1	86.3	876
Rural	81.1	86.3	84.8	45.2	73.7	64.8	89.3	1,230
Total	81.2	87.6	84.6	45.6	71.1	63.7	88.1	2,106

Table A8 Knowledge of where to get HIV test

Percent distribution of respondents who knew where to get HIV test according to selected characteristics

	Proportion who knew where to get HIV test %	Number of all respondents
Age		
15–19	62.3	843
20–24	74.7	1,263
Sex		
Male	70.6	1,124
Female	68.6	982
Marital status		
Currently married/cohabiting	74.7	273
Never married	68.8	1,803
Formerly married	80.0	20
Education		
None	51.5	196
Qur'anic only	80.0	10
Primary	60.9	409
Secondary	73.6	1,404
Higher	89.5	76
Religion		
Islam	60.1	419
Non-Catholic Christian	70.9	1,054
Catholic Christian	74.0	549
Others	75.0	84
Region of residence		
NC	85.0	307
NE	69.1	307
NW	65.2	302
SE	66.1	307
SS	86.3	307
SW	57.3	576
Location of residence		
Urban	80.0	876
Rural	62.4	1,230
Total	69.7	2,106

Table A9 Reason for HIV test

Percent distribution of respondents who have ever had an HIV test by reasons for the HIV test according to selected characteristics

	Voluntary %	Offered %	Mandatory %	No response %	Number of respondents who ever had an HIV test
Age					
15–19	44.3	36.9	11.3	7.4	203
20–24	53.3	30.7	10.8	5.2	576
Sex					
Male	53.4	33.2	7.0	6.5	401
Female	48.4	31.5	15.1	5.0	378
Marital status					
Currently married/ cohabiting	47.4	27.6	21.8	3.2	156
Never married	52.2	33.1	8.2	6.4	607
Formerly married	33.3	50.0	8.3	8.3	12
Education					
None	53.5	27.9	11.6	7.0	43
Qur'anic only	50.0	50.0	0.0	0.0	2
Primary	34.1	44.7	14.6	6.5	123
Secondary	54.4	29.9	9.7	5.9	555
Higher	52.9	29.4	15.7	2.	51
Religion					
Islam	50.0	34.7	9.2	6.1	98
Non-Catholic Christian	44.5	38.2	10.3	7.1	380
Catholic Christian	60.3	25.5	10.9	3.4	267
Others	52.9	14.7	23.5	8.8	34
Region of residence					
NC	71.4	16.4	11.1	1.1	189
NE	50.6	28.1	5.6	15.7	89
NW	62.9	24.8	9.5	2.9	105
SE	43.8	35.7	14.3	6.3	112
SS	28.7	55.2	11.2	4.9	143
SW	43.3	36.2	12.1	8.5	141
Location of residence					
Urban	56.2	29.5	8.3	6.0	386
Rural	45.8	35.1	13.5	5.6	393
Total	51.0	32.3	10.9	5.8	779

Table A10 Period HIV test was conducted

Percent distribution of respondents who had an AIDS test and the period that has elapsed since testing for HIV according to selected characteristics

	Time elapsed since test was done				Number of respondents who ever had HIV test
	Less than 12 months ago %	12 to 23 months ago %	24 months and above %	No response %	
Age					
15–19	61.1	22.2	12.3	4.4	203
20–24	58.2	24.5	14.9	2.4	576
Sex					
Male	56.4	25.7	14.7	3.2	401
Female	61.6	22.0	13.8	2.6	378
Marital status					
Currently married/cohabiting	56.4	26.3	16.0	1.3	156
Never married	59.1	23.4	14.0	3.5	607
Formerly married	66.7	25.0	8.3	0.0	12
Education					
None	53.5	32.6	7.0	7.0	43
Qur'anic only	100.0	0.0	0.0	0.0	2
Primary	60.2	23.6	15.4	0.8	123
Secondary	60.4	22.3	14.1	3.2	555
Higher	45.1	33.3	19.6	2.0	51
Religion					
Islam	48.0	34.7	14.3	3.1	98
Non-Catholic Christian	58.9	24.2	13.2	3.7	380
Catholic Christian	67.0	17.6	13.1	2.2	267
Others	26.5	38.2	35.3	0.0	34
Region of residence					
NC	79.9	13.2	6.3	0.5	189
NE	60.7	19.1	14.6	5.6	89
NW	55.2	24.8	19.0	1.0	105
SE	52.7	23.2	20.5	3.6	112
SS	58.7	27.3	11.9	2.1	143
SW	37.6	37.6	18.4	6.4	141
Location of residence					
Urban	60.6	22.8	14.2	2.3	386
Rural	57.3	24.9	14.2	3.6	393
Total	58.9	23.9	14.2	3.0	779

Table A11 Knowledge of effect of STIs on fertility

Percent distribution of respondents who know that STIs can cause have ever heard of STIs can cause infertility in males and female according to selected characteristics

	Proportion who know that STI has an effect on female fertility %	Proportion who know that STI has an effect on male fertility %	Number of respondents who have heard of STIs
Age			
15–19	52.0	49.9	373
20–24	63.4	61.0	959
Sex			
Male	49.9	61.3	752
Female	61.0	53.4	580
Marital status			
Currently married/cohabiting	62.1	57.5	219
Never married	59.9	58.0	1,092
Formerly married	50.0	50.0	14
Education			
None	61.1	57.4	108
Qur'anic only	66.7	0.0	3
Primary	55.2	53.4	221
Secondary	59.9	57.6	925
Higher	80.9	77.9	68
Religion			
Islam	69.6	68.8	224
Non-Catholic Christian	58.6	57.2	741
Catholic Christian	55.5	51.4	319
Others	72.9	60.4	48
Region of residence			
NC	36.5	37.1	159
NE	41.2	38.9	211
NW	65.0	60.1	143
SE	68.2	69.4	173
SS	54.9	52.0	244
SW	77.6	73.9	402
Location of residence			
Urban	61.9	59.6	609
Rural	58.8	56.4	723
Total	60.2	57.9	1,332

Table A12 Knowledge of symptoms of STIs in women

Percent distribution of respondents who have heard of STI and can describe various symptoms of STIs in women according to selected characteristics

	Low abdominal pain %	Genital discharge %	Foul smelling discharge %	Burning pain on urination %	Genital ulcer or sores %	Swelling in groin %	Itching %	Painful sexual intercourse %	Number of respondents who have heard of STIs
Age									
15–19	22.8	27.3	18.2	30.0	15.0	7.8	33.5	15.0	373
20–24	24.0	38.2	21.3	30.9	19.5	8.9	29.5	19.8	959
Sex									
Male	18.1	31.8	16.8	27.8	17.6	7.6	23.7	17.7	752
Female	30.9	39.5	25.2	34.3	19.1	9.8	39.7	19.5	580
Marital status									
Currently married/cohabiting	25.1	37.0	19.2	30.6	18.7	10.0	29.2	19.6	219
Never married	23.4	35.0	21.0	30.7	18.3	8.3	30.9	18.4	1,092
Formerly married	28.6	35.7	0.0	21.4	7.1	0.0	35.7	7.1	14
Education									
None	23.1	50.0	19.4	38.0	16.7	7.4	32.4	19.4	108
Qur'anic only	33.3	33.3	66.7	0.0	33.3	0.0	66.7	66.7	3
Primary	17.2	29.9	17.2	29.9	14.9	5.4	25.8	14.9	221
Secondary	25.3	33.3	20.5	30.5	17.6	9.8	31.9	17.7	925
Higher	22.1	52.9	27.9	25.0	39.7	2.9	25.0	33.8	68
Region of residence									
NC	24.5	17.0	13.8	36.5	11.3	6.3	34.6	5.7	159
NE	22.3	28.4	20.9	58.3	24.6	11.4	42.2	8.5	211
NW	33.6	58.0	44.8	32.9	23.8	21.0	44.8	40.6	143
SE	9.2	20.8	11.6	13.9	8.1	3.5	20.8	0.6	173
SS	26.2	11.5	15.6	16.0	11.9	7.4	22.1	9.4	244
SW	25.1	58.2	20.9	29.1	23.9	6.5	27.4	34.1	402
Location of residence									
Urban	22.2	35.3	20.7	28.4	20.5	9.4	31.9	18.7	609
Rural	24.9	35.0	20.2	32.5	16.3	7.9	29.6	18.3	723
Total	23.6	35.1	20.4	30.6	18.2	8.6	30.6	18.5	1,332

Table A13 Knowledge of symptoms of STIs in men

Percent distribution of respondents who have heard of STI and can describe various symptoms of STIs in men according to selected characteristics

	Genital discharge %	Burning pain during urination %	Genital ulcer or sores %	Swelling in groin %	Number of respondents who have heard of STIs
Age					
15–19	30.8	64.1	11.0	10.7	373
20–24	41.2	64.2	12.9	11.2	959
Sex					
Male	42.7	70.2	16.1	12.1	752
Female	32.6	56.4	7.6	9.7	580
Marital status					
Currently married/cohabiting	33.8	57.5	6.4	9.6	219
Never married	39.6	65.4	13.5	11.4	1,092
Formerly married	21.4	64.3	14.3	7.1	14
Education					
None	49.1	58.3	9.3	12.0	108
Qur'anic only	0.0	66.7	0.0	0.0	3
Primary	33.0	66.1	11.3	5.9	221
Secondary	37.1	64.1	12.9	12.3	925
Higher	54.4	67.6	14.7	7.4	68
Religion					
Islam	54.5	75.4	15.2	15.2	224
Non-Catholic Christian	41.6	66.3	12.1	11.3	741
Catholic Christian	23.2	53.9	12.2	8.5	319
Others	12.5	47.9	4.2	4.2	48
Region of residence					
NC	17.6	50.9	13.2	7.5	159
NE	34.6	88.6	17.1	12.8	211
NW	46.2	81.8	26.6	30.1	143
SE	10.4	34.7	11.0	4.6	173
SS	32.8	59.0	9.8	15.2	244
SW	60.9	66.2	6.7	5.0	402
Location of residence					
Urban	38.9	63.7	14.9	12.2	609
Rural	37.8	64.6	10.2	10.1	723
Total	38.3	64.2	12.4	11.0	1,332

Table A14 Attitude towards family members living with HIV and AIDS

Percent distribution of respondents who have heard of HIV and AIDS according to attitude towards family members living with HIV according to selected characteristics

	Willing to care for a relative with HIV and AIDS %	Not willing to keep family member's HIV and AIDS information secret %	Number of respondents who have heard of HIV and AIDS
Age			
15–19	76.7	20.3	814
20–24	83.0	20.1	1,246
Sex			
Male	80.8	21.7	1,105
Female	80.1	18.3	955
Marital status			
Currently married/cohabiting	80.4	20.4	270
Never married	80.5	20.1	1,761
Formerly married	80.0	15.0	20
Education			
None	81.4	15.3	183
Qur'anic only	90.0	0.0	10
Primary	74.1	21.6	398
Secondary	81.2	20.7	1,383
Higher	94.7	16.0	75
Religion			
Islam	80.0	7.3	410
Non-Catholic Christian	80.6	24.6	1,029
Catholic Christian	81.3	22.0	540
Others	76.5	16.0	81
Region of residence			
NC	88.8	18.1	304
NE	80.7	9.0	300
NW	82.4	5.8	295
SE	70.6	24.1	303
SS	68.3	63.0	300
SW	86.7	9.7	558
Location of residence			
Urban	82.9	21.6	860
Rural	78.8	19.1	1,200
Total	80.5	20.1	2,060

Table A15 Attitude towards non-family members living with HIV and AIDS

	Willing to eat from the same dish with a person with HIV and AIDS %	Willing to allow a child living with HIV in school %	Willing to allow a female teacher living with HIV in school %	Willing to buy food from a shopkeeper living with HIV %	Willing to work with a colleague living with HIV %	Number of respondents who have heard of HIV and AIDS
Age						
15–19	61.9	72.4	72.6	37.6	71.6	814
20–24	64.1	80.3	78.7	44.5	77.6	1,246
Sex						
Male	62.0	77.7	76.7	41.3	75.8	1,105
Female	64.7	76.4	75.7	42.3	74.6	955
Marital status						
Currently married/cohabiting	60.7	75.2	75.6	43.0	74.8	270
Never married	63.8	77.3	76.3	41.7	75.2	1,761
Formerly married	60.0	90.0	80.0	30.0	85.0	20
Education						
None	62.8	78.1	78.7	43.2	69.4	183
Qur'anic only	30.0	100.0	90.0	20.0	100.0	10
Primary	53.0	68.1	67.8	35.4	65.3	398
Secondary	65.4	78.2	77.2	42.8	77.7	1,383
Higher	84.0	96.0	93.3	58.7	93.3	75
Religion						
Islam	55.1	72.0	67.1	34.6	71.2	410
Non-Catholic Christian	65.6	81.9	82.2	47.4	79.4	1,029
Catholic Christian	64.6	72.0	72.8	37.6	71.9	540
Others	65.4	76.5	70.4	33.3	65.4	81
Region of residence						
NC	77.3	80.3	81.6	46.4	81.6	304
NE	78.3	83.3	80.7	43.0	84.3	300
NW	57.3	72.9	65.8	26.8	64.7	295
SE	50.5	60.1	59.7	28.4	58.7	303
SS	57.3	74.3	78.0	53.7	71.3	300
SW	60.8	85.1	84.6	47.3	83.5	558
Location of residence						
Urban	69.2	82.1	80.0	46.5	78.6	860
Rural	59.0	73.6	73.6	38.3	72.8	1,200
Total	63.3	77.1	76.3	41.7	75.2	2,060

Table A16 Receipt of information or education about HIV and AIDS sero-prevalence

Percent distribution of respondents who received information or education about HIV and AIDS prevalence according to selected characteristics

	Proportion who received information or education about HIV and AIDS %	All respondents
Age		
15–19	58.0	843
20–24	68.8	1,263
Sex		
Male	66.1	1,124
Female	62.6	982
Marital status		
Currently married/cohabiting	69.6	273
Never married	63.7	1,803
Formerly married	75.0	20
Education		
None	59.7	196
Qur'anic only	70.0	10
Primary	50.1	409
Secondary	68.4	1,404
Higher	80.3	76
Religion		
Islam	63.2	419
Non-Catholic Christian	64.6	1,054
Catholic Christian	67.6	549
Others	48.8	84
Region of residence		
NC	83.7	307
NE	33.2	307
NW	66.2	302
SE	44.3	307
SS	80.5	307
SW	72.2	576
Location of residence		
Urban	73.4	876
Rural	58.1	1,230
Total	64.5	2,106

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PMB 5116
Wuse, Abuja
FCT
Nigeria